Personal Finance, 13e (Kapoor)

Chapter 1 Personal Finance Basics and the Time Value of Money

1) Increased demand for a product or service will usually result in lower prices for the item.

Answer: FALSE Difficulty: 1 Easy

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

2) Inflation reduces the buying power of the dollar.

Answer: TRUE Difficulty: 1 Easy

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

3) Lenders benefit more than borrowers in times of high inflation.

Answer: FALSE Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

4) Economics is the study of using money to achieve financial goals.

Answer: FALSE Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

5) Reduced spending causes unemployment from staff reduction.

Answer: TRUE Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

6) A financial plan is another name for a budget.

Answer: FALSE Difficulty: 2 Medium

Topic: Financial plan development

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

7) Developing and using a budget is part of the "obtaining" component of financial planning.

Answer: FALSE Difficulty: 1 Easy

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

8) Planning to buy a car is an example of an intangible-purchase goal.

Answer: FALSE
Difficulty: 2 Medium
Topic: Financial Goals

Learning Objective: 01-03 Develop personal financial goals.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

9) Opportunity costs refer to what a person gives up when making a choice.

Answer: TRUE Difficulty: 2 Medium

Topic: Opportunity Costs

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

10) Personal opportunity costs refer to time, effort, and health that are given up when a decision is made.

Answer: TRUE Difficulty: 2 Medium

Topic: Opportunity Costs

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

11) Time value of money refers to changes in consumer spending when inflation occurs.

Answer: FALSE Difficulty: 2 Medium

Topic: Time value of money - interest rates and inflation

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

12) Interest on savings is calculated by multiplying the principal amount times the opportunity cost times the annual interest rate.

Answer: FALSE Difficulty: 3 Hard

Topic: Time value of money - interest rates and inflation

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

13) Present value is often referred to as compounding.

Answer: FALSE Difficulty: 2 Medium Topic: Present Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

14) Opportunity costs may be viewed only in terms of financial resources.

Answer: FALSE Difficulty: 1 Easy

Topic: Opportunity Costs

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

15) Gross Domestic Product (GDP) measures the total value of goods and services produced within a country's borders, excluding items produced with foreign resources.

Answer: FALSE Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

16) Trade balance is defined as the difference between a country's exports and its imports.

Answer: TRUE Difficulty: 1 Easy

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 17) The main goal of personal financial planning is managing your money to:
- A) save and invest for future needs.
- B) reduce a person's tax liability.
- C) achieve personal economic satisfaction.
- D) spend to achieve financial objectives.
- E) save, spend, and borrow based on current needs.

Answer: C Difficulty: 1 Easy

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 18) Inflation is likely to result from:
- A) lower demand by consumers.
- B) increased production by business.
- C) lower interest rates.
- D) increased demand by consumers without increased supply.
- E) an increase in the supply of a product.

Answer: D

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 19) Who is *most likely* to benefit from inflation?
- A) Retired people
- B) Lenders
- C) Borrowers
- D) Low-income consumers
- E) Government

Answer: C

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 20) Higher consumer prices are likely to be accompanied by:
- A) lower union wages.
- B) lower interest rates.
- C) lower production costs.
- D) higher interest rates.
- E) higher exports.

Answer: D

Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 21) With an inflation rate of 8 percent, prices would double in about _____ years.
- A) 4
- B) 6
- C) 9
- D) 10
- E) 12

Answer: C

Explanation: Rule of 72, 72/8 = 9

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 22) Increased consumer spending will usually cause:
- A) lower consumer prices.
- B) reduced employment levels.
- C) lower wages.
- D) lower interest rates.
- E) higher employment levels.

Answer: E

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 23) Higher interest rates can be caused by:
- A) a lower money supply.
- B) an increase in the money supply.
- C) a decrease in consumer borrowing.
- D) lower consumer spending.
- E) increased saving and investing by consumers.

Answer: A Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 24) The risk premium you receive as a *saver* is based:
- A) on your credit rating.
- B) on the amount of money you are borrowing.
- C) only on the uncertainty associated with getting your money back.
- D) only on the expected rate of inflation.
- E) in part on the uncertainty associated with getting your money back and the expected rate of inflation.

Answer: E Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 25) Which of the following would increase the risk of a loan to the lender?
- A) Inflation rate greater than loan rate
- B) A short time to maturity
- C) Consumer Price Index
- D) Rule of 72
- E) Inflation rate lower than loan rate

Answer: A

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 26) The stages in the family and financial needs of an adult are called the:
- A) financial planning process.
- B) budgeting procedure.
- C) personal economic cycle.
- D) adult life cycle.
- E) tax planning process.

Answer: D
Difficulty: 1 Easy
Topic: Life Cycle

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 27) The study of how wealth is created and distributed is:
- A) financial planning.
- B) opportunity cost.
- C) inflation.
- D) economics.
- E) a market economy.

Answer: D
Difficulty: 1 Easy

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 28) The main economic influence that causes inflation is:
- A) Changes in the stock market.
- B) Decreases in interest rates.
- C) Increases in employment.
- D) Decreases in government spending.
- E) Increases in demand without increases in supply.

Answer: E

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 29) The Fed refers to:
- A) government regulation of business.
- B) Congress.
- C) the Federal Reserve System.
- D) the Federal Deposit Insurance Corporation.
- E) spending by the federal government.

Answer: C

Difficulty: 2 Medium Topic: Financial system

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 30) The main responsibility of *The Fed* is to:
- A) maintain an adequate supply of money.
- B) approve spending by Congress.
- C) set federal income tax rates.
- D) determine illegal business activities.
- E) maintain a balanced budget for the federal government.

Answer: A

Difficulty: 2 Medium Topic: Financial system

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 31) Some savings and investment choices have the potential for higher earnings. However, these may also be difficult to convert to cash when you need the funds. This problem refers to:
- A) inflation risk.
- B) interest rate risk.
- C) income risk.
- D) personal risk.
- E) liquidity risk.

Answer: E

Difficulty: 2 Medium Topic: Liquidity

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 32) Which of the following would cause consumer prices to drop?
- A) Increased consumer borrowing
- B) Higher spending by consumers
- C) A demand for higher wages
- D) Hidden inflation
- E) Increased supply by business without increased consumer demand

Answer: E Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 33) Attempts to increase financial resources are part of the _____ component of financial planning.
- A) planning
- B) obtaining
- C) saving
- D) sharing
- E) protecting

Answer: B Difficulty: 1 Easy

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 34) A major activity in the planning component of financial planning is:
- A) selecting insurance coverage.
- B) evaluating investment alternatives.
- C) gaining occupational training and experience.
- D) anticipating spending through budgeting.
- E) establishing a line of credit.

Answer: D

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 35) The ability to readily convert financial resources into cash without loss of value is referred to as:
- A) bankruptcy.
- B) liquidity.
- C) investing.
- D) saving.
- E) opportunity cost.

Answer: B
Difficulty: 1 Easy
Topic: Liquidity

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 36) The problem of bankruptcy is associated with misuse of credit in the _____ component of financial planning.
- A) sharing
- B) saving
- C) obtaining
- D) borrowing
- E) protecting

Answer: D
Difficulty: 1 Easy

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 37) A question associated with the saving component of financial planning is:
- A) Do you have an adequate emergency fund?
- B) Is your will current?
- C) Is your investment program appropriate to your income and tax situation?
- D) Do you have a realistic budget for your current financial situation?
- E) Are your transportation expenses minimized through careful planning?

Answer: A Difficulty: 1 Easy

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 38) A formalized report that summarizes your current financial situation, analyzes your financial needs, and recommends future financial activities is a(n):
- A) insurance prospectus.
- B) financial plan.
- C) budget.
- D) investment forecast.
- E) statement.

Answer: B

Difficulty: 2 Medium

Topic: Financial plan development

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 39) When an individual makes a purchase without considering the financial consequences of that purchase, he/she ignores the _____ aspect of financial planning.
- A) borrowing
- B) risk management
- C) spending
- D) retirement and estate planning
- E) obtaining

Answer: C Difficulty: 1 Easy

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 40) The success of a financial plan will be determined by:
- A) the amount of debts owed.
- B) the stage of the adult life cycle.
- C) a person's tax status.
- D) the individual's financial habits.
- E) current economic conditions.

Answer: D

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

41) As Olivia Wilson plans to set aside funds for her young children's college education, she is
setting a(n) goal.
A) intermediate
B) long-term
C) short-term
D) intangible
E) durable
Answer: B
Difficulty: 1 Easy
Topic: Financial Goals
Learning Objective: 01-03 Develop personal financial goals.
Bloom's: Remember
Accessibility: Keyboard Navigation; Screen Reader Compatible
Gradable: automatic
Gradable: automatic
42) and relate to managed relationships health, and advection
goals relate to personal relationships, health, and education.
A) Durable-product
B) Short-term
C) Consumable-product
D) Intangible-purchase
E) Intermediate
A.,
Answer: D
Difficulty: 2 Medium
Topic: Financial Goals
Learning Objective: 01-03 Develop personal financial goals.
Bloom's: Remember
Accessibility: Keyboard Navigation; Screen Reader Compatible
Gradable: automatic
42) W'11' D ' 1
43) William Davis has a goal of "saving \$60 a month for vacation." William's goal lacks:
A) measurable terms.
B) a realistic perspective.
C) specific terms.
D) the type of action to be taken.
E) a time frame.
A consequent T
Answer: E
Difficulty: 2 Medium
Topic: Financial Goals - SMART approach
Learning Objective: 01-03 Develop personal financial goals.
Bloom's: Understand
Accessibility: Keyboard Navigation; Screen Reader Compatible
Gradable: automatic

- 44) Which of the following goals would be the easiest to implement and measure its accomplishment?
- A) "Reduce our debt payments."
- B) "Save funds for an annual vacation."
- C) "Save \$50 a month to create a \$2,000 emergency fund."
- D) "Invest \$1,200 a year for retirement."
- E) "Increase our emergency fund."

Answer: C

Difficulty: 2 Medium

Topic: Financial Goals - SMART approach

Learning Objective: 01-03 Develop personal financial goals.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 45) Opportunity cost refers to:
- A) money needed for major consumer purchases.
- B) what a person gives up by making a choice.
- C) the amount paid for taxes when a purchase is made.
- D) current interest rates.
- E) evaluating different alternatives for financial decisions.

Answer: B

Difficulty: 2 Medium

Topic: Opportunity Costs

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 46) An example of a *personal* opportunity cost would be:
- A) interest lost by using savings to make a purchase.
- B) higher earnings on savings that must be kept on deposit a minimum of six months.
- C) lost wages due to continuing as a full-time student.
- D) time comparing several brands of personal computers.
- E) having to pay a tax penalty due to not having enough withheld from your monthly salary.

Answer: D

Difficulty: 2 Medium

Topic: Opportunity Costs

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 47) The time value of money refers to:
- A) opportunity costs such as time lost on an activity.
- B) financial decisions that require borrowing funds from a financial institution.
- C) changes in interest rates due to changes in the supply and demand for money in our economy.
- D) increases in an amount of money as a result of interest earned.
- E) changing demographic trends in our society.

Answer: D

Difficulty: 2 Medium

Topic: Time value of money - interest rates and inflation

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 48) The amount of interest is determined by multiplying the amount in savings by the:
- A) annual interest rate.
- B) time period.
- C) number of months in a year.
- D) time period and number of months.
- E) annual interest rate and the time period.

Answer: E

Difficulty: 2 Medium

Topic: Time value of money - interest rates and inflation

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 49) If a person deposited \$75 a month for 5 years earning 7 percent, this would involve what type of computation?
- A) Simple interest
- B) Future value of a single amount
- C) Future value of a series of deposits
- D) Present value of a single amount
- E) Present value of a series of deposits

Answer: C Difficulty: 3 Hard

Topic: Time value of money - Future Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 50) Which type of computation would a person use to determine the current value of a desired amount in the future?
- A) Simple interest
- B) Future value of a single amount
- C) Future value of a series of deposits
- D) Present value of a single amount
- E) Compound interest

Answer: D

Difficulty: 2 Medium

Topic: Time value of money - Present Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 51) If inflation is increasing at 4 percent per year, and your salary increases at the same rate, how long will it take your salary to double?
- A) 24 years
- B) 18 years
- C) 14 years
- D) 12 years
- E) 6 years

Answer: B

Explanation: Rule of 72: 72/4 = 18

Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 52) When prices are increasing at a rate of 12 percent, the cost of products would double in about how many years?
- A) 24 years
- B) 18 years
- C) 12 years
- D) 6 years
- E) 3 years

Answer: D

Explanation: Rule of 72: 72/12 = 6

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 53) Future value calculations involve:
- A) discounting.
- B) add-on interest.
- C) compounding.
- D) simple interest.
- E) an annuity.

Answer: C

Difficulty: 2 Medium

Topic: Time value of money - Future Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 54) If you put \$500 in a savings account and make no further deposits, what type of calculation would provide you with the value of the account in 10 years?
- A) Future value of a single amount
- B) Simple interest
- C) Present value of a single amount
- D) Present value of a series of deposits
- E) Future value of a series of deposits

Answer: A

Difficulty: 2 Medium

Topic: Time value of money - Future Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 55) The first step of the financial planning process is to:
- A) develop financial goals.
- B) implement the financial plan.
- C) determine your current financial situation.
- D) review and revise your financial plan.
- E) create a financial action plan.

Answer: C Difficulty: 1 Easy

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

56) risk refers to the danger of changes in buying power during times of rising or falling prices. A) Liquidity B) Income C) Personal D) Inflation E) Interest Rate
Answer: D Difficulty: 2 Medium Topic: Investment risks and measures Learning Objective: 01-01 Analyze the process for making personal financial decisions. Bloom's: Remember Accessibility: Keyboard Navigation; Screen Reader Compatible Gradable: automatic
 57) Which of the following is an example of opportunity cost? A) Renting an apartment near school B) Saving money instead of taking a vacation C) Setting aside money for paying income tax D) Purchasing automobile insurance E) Using a personal computer for financial planning
Answer: B Difficulty: 2 Medium Topic: Opportunity Costs Learning Objective: 01-01 Analyze the process for making personal financial decisions. Bloom's: Understand Accessibility: Keyboard Navigation; Screen Reader Compatible Gradable: automatic
58) The changing cost of money when borrowing is referred to as risk. A) interest rate B) inflation C) income D) liquidity E) personal
Answer: A Difficulty: 2 Medium Topic: Investment risks and measures Learning Objective: 01-01 Analyze the process for making personal financial decisions. Bloom's: Remember Accessibility: Keyboard Navigation; Screen Reader Compatible Gradable: automatic

- 59) The uncertainty associated with every decision is referred to as:
- A) opportunity cost.
- B) selection of alternatives.
- C) financial goals.
- D) personal values.
- E) risk.

Answer: E Difficulty: 1 Easy

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 60) The financial planning process concludes with efforts to:
- A) develop financial goals.
- B) create a financial action plan.
- C) determine your current financial situation.
- D) implement the financial action plan.
- E) review and revise your financial plan.

Answer: E Difficulty: 1 Easy

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 61) Using the services of financial institutions to research a situation will be most evident in your effort to:
- A) develop financial goals.
- B) review and revise your financial plan.
- C) determine your current financial situation.
- D) evaluate your alternatives.
- E) create a financial action plan.

Answer: D
Difficulty: 3 Hard

Topic: Financial planning process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 62) Changes in personal, social, and economic factors make it necessary to:
- A) review and revise your financial plan.
- B) implement the financial plan.
- C) develop financial goals.
- D) determine your current financial situation.
- E) create a financial action plan.

Answer: A Difficulty: 1 Easy

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 63) Which of the following is usually considered a long-term financial strategy?
- A) Creating a budget this year
- B) Using savings to pay off a loan within one year
- C) Renting an apartment for three years to save for the purchase of a home
- D) Investing in a mutual fund for six years to accumulate retirement funds
- E) Purchasing a six month auto insurance policy to cover the needs of dependents

Answer: D

Difficulty: 2 Medium Topic: Financial Goals

Learning Objective: 01-03 Develop personal financial goals.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 64) Sophia Martin is assessing her balances. She expects to retire in the next year and has \$675,000 in savings and investments and owns her own home that is worth \$250,000. Which step in the financial planning process does this situation demonstrate?
- A) Determining her current financial situation
- B) Developing her financial goals
- C) Identifying alternative courses of action
- D) Evaluating her alternatives
- E) Implementing her financial plan

Answer: A

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 65) Sophia Martin wants to travel after she retires as well as pay off the balance of the loan she has on the home she owns. Which step in the financial planning process does this situation demonstrate?
- A) Determining her current financial situation
- B) Developing her financial goals
- C) Identifying alternative courses of action
- D) Evaluating her alternatives
- E) Implementing her financial plan

Answer: B

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 66) Sophia Martin wants to travel around the world. Sophia has three options she can pursue: she could continue to work full time to earn the money she needs for her trip, she could work part time so that she can still earn some money but have the time necessary to complete her trip, or she could take full retirement so that she has all the time necessary to complete her trip. Which step in the financial planning process does this scenario demonstrate?
- A) Determining her current financial situation
- B) Developing her financial goals
- C) Identifying alternative courses of action
- D) Evaluating her alternatives
- E) Implementing her financial plan

Answer: C

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 67) Sophia Martin knows that if she continues to work full time, it will be difficult for her to get the time off she needs to be able to travel around the world. However, if she continues to work full time she will more easily earn the money she needs to take her trip and still have money left for her living expenses after she gets back from her trip. Which step in the financial planning process does this scenario demonstrate?
- A) Determining her current financial situation
- B) Developing her financial goals
- C) Identifying alternative courses of action
- D) Evaluating her alternatives
- E) Implementing her financial plan

Answer: D

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 68) Sophia Martin has decided to retire and use the time she has earned to travel around the world. She has decided to start her trip around the world in Europe by train and bus and will use her savings to pay for her trip. Which step in the financial planning process does this scenario demonstrate?
- A) Developing her financial goals
- B) Identifying alternative courses of action
- C) Evaluating her alternatives
- D) Implementing her financial plan
- E) Reviewing and revising her financial plan

Answer: D

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 69) Sophia Martin's goal has been to travel around the world. She has now been traveling for six months and she has decided she is a little tired of living out of a suitcase. She has decided to go home, look for a part time job, and take shorter trips to locations around the world that appeal to her. Which step in the financial planning process does this scenario most likely demonstrate?
- A) Developing her financial goals
- B) Identifying alternative courses of action
- C) Evaluating her alternatives
- D) Implementing her financial plan
- E) Reviewing and revising her financial plan

Answer: E

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 70) Patrick Jones is interested in purchasing a 65" LED TV for his living room. Patrick knows that right now the TV will cost approximately \$500. He is not sure he can afford this TV right now but is worried that if he waits, the cost of the TV will rise to \$800. Which type of risk is Patrick worried about?
- A) Inflation risk
- B) Interest rate risk
- C) Income risk
- D) Personal risk
- E) Liquidity risk

Answer: A

Difficulty: 2 Medium

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 71) Patrick Jones is interested in purchasing a 65" LED TV for his living room. He knows that right now the TV will cost approximately \$500. Patrick wants to borrow the money to purchase the TV but is concerned that interest rates are going to fall in the future. He is worried that he might get stuck with a loan at a high interest rate. What type of risk is Patrick worried about?
- A) Inflation risk
- B) Interest rate risk
- C) Income risk
- D) Personal risk
- E) Liquidity risk

Answer: B

Difficulty: 2 Medium

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 72) Patrick Jones is interested in purchasing a 65" LED TV for his living room. He knows that right now the TV will cost approximately \$500. However, Patrick is a little concerned about his job. Patrick is a pilot for Delta Airlines, and he thinks it is possible that he could be laid off in the near future. What type of risk is Patrick worried about?
- A) Inflation risk
- B) Interest rate risk
- C) Income risk
- D) Personal risk
- E) Liquidity risk

Answer: C

Difficulty: 2 Medium

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 73) Natalie Smith is considering investing in 30-year corporate bonds issued by Duke Energy Company. She knows that she will earn an interest rate of 6% by purchasing these bonds. However, she is concerned because she might need to take her money out of this investment in a year, and she has heard that she might have to sell the bonds at a significantly lower price than she will purchase them for. What type of risk is Natalie concerned about?
- A) Inflation risk
- B) Interest rate risk
- C) Income risk
- D) Personal risk
- E) Liquidity risk

Answer: E

Difficulty: 2 Medium

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 74) Benjamin Smith has just moved into a new house and needs a lawn mower since he has always lived in apartments and now he has a lawn to mow. What type of goal would this be for Benjamin?
- A) Consumable-product goal
- B) Durable-product goal
- C) Intangible goal
- D) Intermediate goal
- E) Long term goal

Answer: B Difficulty: 1 Easy

Topic: Financial Goals

Learning Objective: 01-03 Develop personal financial goals.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 75) Stella Jones likes to go to the movies once a week. When she is at the movies, she generally gets a large popcorn and a drink. Stella wants to be sure that she sets aside money each week so she can continue going to the movies. What type of goal would this be for Stella?
- A) Consumable-product goal
- B) Durable-product goal
- C) Intangible goal
- D) Intermediate goal
- E) Long term goal

Answer: A

Difficulty: 2 Medium Topic: Financial Goals

Learning Objective: 01-03 Develop personal financial goals.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 76) Paul Carter is 42 years old, married and has three children, ages 15, 13 and 8. This discussion is a demonstration of what factor in personal financial planning?
- A) Adult life cycle
- B) Economic factors
- C) Global influences
- D) Opportunity costs
- E) None of these

Answer: A

Difficulty: 2 Medium Topic: Life Cycle

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 77) One aspect of financial planning is to make wise decisions using a plan as to what to purchase and when to purchase it. Which component of financial planning does this deal with?
- A) Borrowing
- B) Spending
- C) Managing risk
- D) Investing
- E) Retirement and estate planning

Answer: B

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 78) One aspect of financial planning is to use credit appropriately/wisely. Which component of financial planning does this deal with?
- A) Borrowing
- B) Spending
- C) Managing risk
- D) Investing
- E) Retirement and estate planning

Answer: A

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 79) One aspect of financial planning is to make sure you maintain adequate insurance coverage for your needs. Which component of financial planning does this deal with?
- A) Borrowing
- B) Spending
- C) Managing risk
- D) Investing
- E) Retirement and estate planning

Answer: C

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 80) One aspect of financial planning is to buy stocks, real estate, and mutual funds with the potential for long-term growth. Which component of financial planning does this deal with?
- A) Borrowing
- B) Spending
- C) Managing risk
- D) Investing
- E) Retirement and estate planning

Answer: D

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

81) When prices are rising at a rate of 3 percent, the cost of products and services would double in years.

 $A)\overline{3}$

B) 6

C) 18

D) 24

E) 72

Answer: D

Explanation: Rule of 72, 72/3 = 24

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 82) Resources for financial planning can be found from:
- A) print media.
- B) digital media.
- C) financial institutions.
- D) financial specialists.
- E) All of these.

Answer: E Difficulty: 1 Easy

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 83) The annual price increase for most goods and services measured by the Bureau of Labor Statistics is called .
- A) deflation
- B) inflation
- C) the consumer price index
- D) the price calculator
- E) the goods index

Answer: C Difficulty: 1 Easy

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 84) If you desire your savings to double in 6 years, what rate of return would you need to earn?
- A) 6 percent
- B) 8 percent
- C) 9 percent
- D) 10 percent
- E) 12 percent

Answer: E

Explanation: Rule of 72, 72/x = 6, 6X = 72, 72/6 = 12

Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

85) A family spends \$40,000 on living expenses. With an annual inflation rate of 3 percent, they can expect to spend approximately _____ in one year. Use Exhibit 1-A. (Round time value factors to 3 decimal places and final answer to the nearest dollar amount.)

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100	1.110
2	1.020	1.040	1.061	1.082	1.103	1.124	1.145	1.166	1.188	1.210	1.232
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331	1.368
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464	1.518
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611	1.68
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772	1.870
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949	2.07
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144	2.30
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358	2.558
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594	2.839
11	1.116	1.243	1.384	1.539	1.710	1.898	2.105	2.332	2.580	2.853	3.15
12	1.127	1.268	1.426	1.601	1.796	2.012	2.252	2.518	2.813	3.138	3.498
13	1.138	1.294	1.469	1.665	1.886	2.133	2.410	2.720	3.066	3.452	3.883
14	1.149	1.319	1.513	1.732	1.980	2.261	2.579	2.937	3.342	3.797	4.310
15	1.161	1.346	1.558	1.801	2.079	2.397	2.759	3.172	3.642	4.177	4.785
16	1.173	1.373	1.605	1.873	2.183	2.540	2.952	3.426	3.970	4.595	5.31
17	1.184	1.400	1.653	1.948	2.292	2.693	3.159	3.700	4.328	5.054	5.895
18	1.196	1.428	1.702	2.026	2.407	2.854	3.380	3.996	4.717	5.560	6.544
19	1.208	1.457	1.754	2.107	2.527	3.026	3.617	4.316	5.142	6.116	7.263
20	1.220	1.486	1.806	2.191	2.653	3.207	3.870	4.661	5.604	6.727	8.062
25	1.282	1.641	2.094	2.666	3.386	4.292	5.427	6.848	8.623	10.835	13.585
30	1.348	1.811	2.427	3.243	4.322	5.743	7.612	10.063	13.268	17.449	22.892
40	1.489	2.208	3.262	4.801	7.040	10.286	14.974	21.725	31.409	45.259	65.001
50	1.645	2.692	4.384	7.107	11.467	18.420	29.457	46.902	74.358	117.391	184.565
Period	12%	13%	14%	15%	16%	17%	18%	19%	20%	25%	30%
1	1.120	1.130	1.140	1.150	1.160	1.170	1.180	1.190	1.200	1.250	1.300
2	1.254	1.277	1.300	1.323	1.346	1.369	1.392	1.416	1.440	1.563	1.690
3	1.405	1.443	1.482	1.521	1.561	1.602	1.643	1.685	1.728	1.953	2.197
4	1.574	1.630	1.689	1.749	1.811	1.874	1.939	2.005	2.074	2.441	2.856
5	1.762	1.842	1.925	2.011	2.100	2.192	2.288	2.386	2.488	3.052	3.713
6	1.974	0.000	2.195				2.700	2.840	2.986	3.815	4.827
7		2.082	2.195	2.313	2.436	2.565	2.700		2.500	3.013	4.027
7	2.211	2.353	2.193	2.313	2.436	3.001	3.185	3.379	3.583	4.768	
8	2.211 2.476	2.353 2.658	2.502 2.853				3.185 3.759				6.275 8.157
	2.211 2.476 2.773	2.353 2.658 3.004	2.502 2.853 3.252	2.660	2.826	3.001 3.511 4.108	3.185	3.379	3.583	4.768	6.275 8.157
8 9 10	2.211 2.476 2.773 3.106	2.353 2.658 3.004 3.395	2.502 2.853 3.252 3.707	2.660 3.059 3.518 4.046	2.826 3.278	3.001 3.511 4.108 4.807	3.185 3.759	3.379 4.021	3.583 4.300 5.160 6.192	4.768 5.960	6.275 8.157 10.604 13.786
9 10 11	2.211 2.476 2.773 3.106 3.479	2.353 2.658 3.004 3.395 3.836	2.502 2.853 3.252 3.707 4.226	2.660 3.059 3.518 4.046 4.652	2.826 3.278 3.803 4.411 5.117	3.001 3.511 4.108 4.807 5.624	3.185 3.759 4.435 5.234 6.176	3.379 4.021 4.785 5.695 6.777	3.583 4.300 5.160 6.192 7.430	4.768 5.960 7.451 9.313 11.642	6.275 8.157 10.604 13.786 17.922
8 9 10 11 12	2.211 2.476 2.773 3.106 3.479 3.896	2.353 2.658 3.004 3.395 3.836 4.335	2.502 2.853 3.252 3.707 4.226 4.818	2.660 3.059 3.518 4.046 4.652 5.350	2.826 3.278 3.803 4.411 5.117 5.936	3.001 3.511 4.108 4.807 5.624 6.580	3.185 3.759 4.435 5.234 6.176 7.288	3.379 4.021 4.785 5.695 6.777 8.064	3.583 4.300 5.160 6.192 7.430 8.916	4.768 5.960 7.451 9.313 11.642 14.552	6.275 8.157 10.604 13.786 17.922 23.298
8 9 10 11 12 13	2.211 2.476 2.773 3.106 3.479 3.896 4.363	2.353 2.658 3.004 3.395 3.836 4.335 4.898	2.502 2.853 3.252 3.707 4.226 4.818 5.492	2.660 3.059 3.518 4.046 4.652 5.350 6.153	2.826 3.278 3.803 4.411 5.117 5.936 6.886	3.001 3.511 4.108 4.807 5.624 6.580 7.699	3.185 3.759 4.435 5.234 6.176 7.288 8.599	3.379 4.021 4.785 5.695 6.777 8.064 9.596	3.583 4.300 5.160 6.192 7.430 8.916 10.699	4.768 5.960 7.451 9.313 11.642 14.552 18.190	6.275 8.155 10.604 13.786 17.922 23.298 30.288
8 9 10 11 12 13 14	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887	2.353 2.658 3.004 3.395 3.836 4.335 4.898 5.535	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988	3.001 3.511 4.108 4.807 5.624 6.580 7.699 9.007	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737	6.273 8.157 10.604 13.786 17.927 23.298 30.288 39.374
8 9 10 11 12 13 14	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474	2.353 2.658 3.004 3.395 3.836 4.335 4.898 5.535 6.254	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266	3.001 3.511 4.108 4.807 5.624 6.580 7.699 9.007 10.539	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422	6.273 8.157 10.604 13.786 17.922 23.298 30.288 39.374 51.186
8 9 10 11 12 13 14 15	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474 6.130	2.353 2.658 3.004 3.395 3.836 4.335 4.898 5.535 6.254 7.067	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138 8.137	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137 9.358	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266 10.748	3.001 3.511 4.108 4.807 5.624 6.580 7.699 9.007 10.539 12.330	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974 14.129	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590 16.172	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407 18.488	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422 35.527	6.273 8.157 10.604 13.786 17.922 23.298 30.288 39.374 51.186 66.542
8 9 10 11 12 13 14 15 16 17	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474 6.130 6.866	2.353 2.658 3.004 3.395 3.836 4.335 4.898 5.535 6.254 7.067	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138 8.137 9.276	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137 9.358 10.761	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266 10.748 12.468	3.001 3.511 4.108 4.807 5.624 6.580 7.699 9.007 10.539 12.330 14.426	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974 14.129 16.672	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590 16.172 19.244	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407 18.488 22.186	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422 35.527 44.409	6.27: 8.15; 10.604 13.78(17.92; 23.298 30.288 39.374 51.18(66.542
8 9 10 11 12 13 14 15 16 17 18	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474 6.130 6.866 7.690	2.353 2.658 3.004 3.395 3.836 4.335 4.898 5.535 6.254 7.067 7.986 9.024	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138 8.137 9.276 10.575	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137 9.358 10.761 12.375	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266 10.748 12.468 14.463	3.001 3.511 4.108 4.807 5.624 6.580 7.699 9.007 10.539 12.330 14.426 16.879	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974 14.129 16.672 19.673	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590 16.172 19.244 22.901	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407 18.488 22.186 26.623	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422 35.527 44.409 55.511	6.27: 8.15; 10.604 13.78(17.92; 23.298; 39.374 51.18(66.54(86.504 112.45;
8 9 10 11 12 13 14 15 16 17 18 19	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474 6.130 6.866 7.690 8.613	2.353 2.658 3.004 3.395 3.836 4.335 4.898 5.535 6.254 7.067 7.986 9.024 10.197	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138 8.137 9.276 10.575 12.056	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137 9.358 10.761 12.375	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266 10.748 12.468 14.463 16.777	3.001 3.511 4.108 4.807 5.624 6.580 7.699 9.007 10.539 12.330 14.426 16.879 19.748	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974 14.129 16.672 19.673 23.214	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590 16.172 19.244 22.901 27.252	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407 18.488 22.186 26.623 31.948	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422 35.527 44.409 55.511 69.389	6.27: 8.15; 10.60 13.786 17.92; 23.29; 30.28; 39.37; 51.186 66.54; 86.50; 112.45;
8 9 10 11 12 13 14 15 16 17 18 19 20	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474 6.130 6.866 7.690 8.613	2.353 2.658 3.004 3.395 3.836 4.395 5.535 6.254 7.067 7.986 9.024 10.197 11.523	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138 8.137 9.276 10.575 12.056	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137 9.358 10.761 12.375 14.232	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266 10.748 12.468 14.463 16.777	3.001 3.511 4.108 4.807 5.624 6.580 9.007 10.539 12.330 14.426 16.879 19.748	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974 14.129 16.672 19.673 23.214 27.393	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590 16.172 19.244 22.901 27.252 32.429	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407 18.488 22.186 26.623 31.948 38.338	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422 35.527 44.409 55.511 69.389 86.736	6.275 8.157 10.604 13.786 17.922 23.296 30.288 39.374 51.186 66.542 86.504 112.455 146.192
8 9 10 11 12 13 14 15 16 17 18 19 20 25	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474 6.130 6.866 7.690 8.613 9.646	2.353 2.658 3.004 3.395 3.836 4.335 4.898 5.535 6.254 7.067 7.986 9.024 10.197 11.523 21.231	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138 8.137 9.276 10.575 12.056 13.743 26.462	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137 9.358 10.761 12.375 14.232 16.367 32.919	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266 10.748 12.468 14.463 16.777 19.461 40.874	3.001 3.511 4.108 4.807 5.624 6.580 9.007 10.539 12.330 14.426 16.879 19.748 23.106 50.658	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974 14.129 16.672 19.673 23.214 27.393 62.669	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590 16.172 19.244 22.901 27.252 3.429 77.388	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407 18.488 22.186 26.623 31.948 8.338 95.396	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422 35.527 44.409 55.511 69.389 86.736 264.698	6.275 8.157 10.604 13.786 17.922 23.298 30.288 39.374 51.186 66.542 86.504 112.455 146.192 190.056
8 9 10 11 12 13 14 15 16 17 18 19 20	2.211 2.476 2.773 3.106 3.479 3.896 4.363 4.887 5.474 6.130 6.866 7.690 8.613	2.353 2.658 3.004 3.395 3.836 4.395 5.535 6.254 7.067 7.986 9.024 10.197 11.523	2.502 2.853 3.252 3.707 4.226 4.818 5.492 6.261 7.138 8.137 9.276 10.575 12.056	2.660 3.059 3.518 4.046 4.652 5.350 6.153 7.076 8.137 9.358 10.761 12.375 14.232	2.826 3.278 3.803 4.411 5.117 5.936 6.886 7.988 9.266 10.748 12.468 14.463 16.777	3.001 3.511 4.108 4.807 5.624 6.580 9.007 10.539 12.330 14.426 16.879 19.748	3.185 3.759 4.435 5.234 6.176 7.288 8.599 10.147 11.974 14.129 16.672 19.673 23.214 27.393	3.379 4.021 4.785 5.695 6.777 8.064 9.596 11.420 13.590 16.172 19.244 22.901 27.252 32.429	3.583 4.300 5.160 6.192 7.430 8.916 10.699 12.839 15.407 18.488 22.186 26.623 31.948 38.338	4.768 5.960 7.451 9.313 11.642 14.552 18.190 22.737 28.422 35.527 44.409 55.511 69.389 86.736	6.275 8.157 10.604 13.786 17.922 23.298 30.288 39.374 51.186 66.542 86.504

- A) \$40,300
- B) \$41,200
- C) \$42,000
- D) \$43,720
- E) \$46,000

Answer: B

Explanation: Future value of a single amount $[\$40,000 + (\$40,000 \times 0.03 \times 1 \text{ year})] = \$41,200.$

Difficulty: 2 Medium Topic: Future Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

86) The future value of \$50 deposited each year for 6 years earning 7 percent would be approximately: Use Exhibit 1-B. (Round time value factors to 3 decimal places and final answer to the nearest dollar amount.)

Exhibit 1-B Future value	(compounded sum) of \$1	paid in at the end of each	period for a given number	of time periods (an annuity)
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Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.010	2.020	2.030	2.040	2.050	2.060	2.070	2.080	2.090	2.100	2.110
3	3.030	3.060	3.091	3.122	3.153	3.184	3.215	3.246	3.278	3.310	3.342
4	4.060	4.122	4.184	4.246	4.310	4.375	4.440	4.506	4.573	4.641	4.710
5	5.101	5.204	5.309	5.416	5.526	5.637	5.751	5.867	5.985	6.105	6.228
6	6.152	6.308	6.468	6.633	6.802	6.975	7.153	7.336	7.523	7.716	7.913
7	7.214	7.434	7.662	7.898	8.142	8.394	8.654	8.923	9.200	9.487	9.783
8	8.286	8.583	8.892	9.214	9.549	9.897	10.260	10.637	11.028	11.436	11.859
9	9.369	9.755	10.159	10.583	11.027	11.491	11.978	12.488	13.021	13.579	14.164
10	10.462	10.950	11.464	12.006	12.578	13.181	13.816	14.487	15.193	15.937	16.722
11	11.567	12.169	12.808	13.486	14.207	14.972	15.784	16.645	17.560	18.531	19.561
12	12.683	13.412	14.192	15.026	15.917	16.870	17.888	18.977	20.141	21.384	22.713
13	13.809	14.680	15.618	16.627	17.713	18.882	20.141	21.495	22.953	24.523	26.212
14	14.947	15.974	17.086	18.292	19.599	21.015	22.550	24.215	26.019	27.975	30.095
15	16.097	17.293	18.599	20.024	21.579	23.276	25.129	27.152	29.361	31.772	34.405
16	17.258	18.639	20.157	21.825	23.657	25.673	27.888	30.324	33.003	35.950	39.190
17	18.430	20.012	21.762	23.698	25.840	28.213	30.840	33.750	36.974	40.545	44.501
18	19.615	21.412	23.414	25.645	28.132	30.906	33.999	37.450	41.301	45.599	50.396
19	20.811	22.841	25.117	27.671	30.539	33.760	37.379	41.446	46.018	51.159	56.939
20	22.019	24.297	26.870	29.778	33.066	36.786	40.995	45.762	51.160	57.275	64.203
25	28.243	32.030	36.459	41.646	47.727	54.865	63.249	73.106	84.701	98.347	114.413
30	34.785	40.568	47.575	56.085	66.439	79.058	94.461	113.283	136.308	164.494	199.021
40	48.886	60.402	75.401	95.026	120.800	154.762	199.635	259.057	337.882	442.593	581.826
50	64.463	84.579	112.797	152.667	209.348	290.336	406.529	573.770	815.084	1163.909	1668.771
Period	12%	13%	14%	15%	16%	17%	18%	19%	20%	25%	30%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.120	2.130	2.140	2.150	2.160	2.170	2.180	2.190	2.200	2.250	2.300
3	3.374	3.407	3.440	3.473	3.506	3.539	3.572	3.606	3.640	3.813	3.990
4	4.779	4.850	4.921	4.993	5.066	5.141	5.215	5.291	5.368	5.766	6.187
5	6.353	6.480	6.610	6.742	6.877	7.014	7.154	7.297	7.442	8.207	9.043
6	8.115	8.323	8.536	8.754	8.977	9.207	9.442	9.683	9.930	11.259	12.756
7	10.089	10.405	10.730	11.067	11.414	11.772	12.142	12.523	12.916	15.073	17.583
8	12.300	12.757	13.233	13.727	14.240	14.773	15.327	15.902	16.499	19.842	23.858
9	14.776	15.416	16.085	16.786	17.519	18.285	19.086	19.923	20.799	25.802	32.015
10	17.549	18.420	19.337	20.304	21.321	22.393	23.521	24.709	25.959	33.253	42.619
11	20.655	21.814	23.045	24.349	25.733	27.200	28.755	30.404	32.150	42.566	56.405
12	24.133	25.650	27.271	29.002	30.850	32.824	34.931	37.180	39.581	54.208	74.327
13	28.029	29.985	32.089	34.352	36.786	39.404	42.219	45.244	48.497	68.760	97.625
	32.393	34.883	37.581	40.505	43.672	47.103	50.818	54.841	59.196	86.949	127.913
14						56.110	60.965	66.261	72.035	109.687	167.286
15	37.280	40.417	43.842	47.580	51.660						
15 16	42.753	46.672	50.980	55.717	60.925	66.649	72.939	79.850	87.442	138.109	218.472
15 16 17	42.753 48.884	46.672 53.739	50.980 59.118	55.717 65.075	60.925 71.673	66.649 78.979	72.939 87.068	79.850 96.022	105.931	173.636	285.014
15 16 17 18	42.753 48.884 55.750	46.672 53.739 61.725	50.980 59.118 68.394	55.717 65.075 75.836	60.925 71.673 84.141	66.649 78.979 93.406	72.939 87.068 103.740	79.850 96.022 115.266	105.931 128.117	173.636 218.045	285.014 371.518
15 16 17 18 19	42.753 48.884 55.750 63.440	46.672 53.739 61.725 70.749	50.980 59.118 68.394 78.969	55.717 65.075 75.836 88.212	60.925 71.673 84.141 98.603	66.649 78.979 93.406 110.285	72.939 87.068 103.740 123.414	79.850 96.022 115.266 138.166	105.931 128.117 154.740	173.636 218.045 273.556	285.014 371.518 483.973
15 16 17 18 19 20	42.753 48.884 55.750 63.440 72.052	46.672 53.739 61.725 70.749 80.947	50.980 59.118 68.394 78.969 91.025	55.717 65.075 75.836 88.212 102.444	60.925 71.673 84.141 98.603 115.380	66.649 78.979 93.406 110.285 130.033	72.939 87.068 103.740 123.414 146.628	79.850 96.022 115.266 138.166 165.418	105.931 128.117 154.740 186.688	173.636 218.045 273.556 342.945	285.014 371.518 483.973 630.165
15 16 17 18 19 20 25	42.753 48.884 55.750 63.440 72.052 133.334	46.672 53.739 61.725 70.749 80.947 155.620	50.980 59.118 68.394 78.969 91.025 181.871	55.717 65.075 75.836 88.212 102.444 212.793	60.925 71.673 84.141 98.603 115.380 249.214	66.649 78.979 93.406 110.285 130.033 292.105	72.939 87.068 103.740 123.414 146.628 342.603	79.850 96.022 115.266 138.166 165.418 402.042	105.931 128.117 154.740 186.688 471.981	173.636 218.045 273.556 342.945 1054.791	285.014 371.518 483.973 630.165 2348.803
15 16 17 18 19 20 25 30	42.753 48.884 55.750 63.440 72.052 133.334 241.333	46.672 53.739 61.725 70.749 80.947 155.620 293.199	50,980 59.118 68.394 78.969 91.025 181.871 356.787	55.717 65.075 75.836 88.212 102.444 212.793 434.745	60.925 71.673 84.141 98.603 115.380 249.214 530.312	66.649 78.979 93.406 110.285 130.033 292.105 647.439	72.939 87.068 103.740 123.414 146.628 342.603 790.948	79.850 96.022 115.266 138.166 165.418 402.042 966.712	105.931 128.117 154.740 186.688 471.981 1181.882	173.636 218.045 273.556 342.945 1054.791 3227.174	285.014 371.518 483.973 630.165 2348.803 8729.985
15 16 17 18 19 20 25	42.753 48.884 55.750 63.440 72.052 133.334	46.672 53.739 61.725 70.749 80.947 155.620	50.980 59.118 68.394 78.969 91.025 181.871	55.717 65.075 75.836 88.212 102.444 212.793	60.925 71.673 84.141 98.603 115.380 249.214	66.649 78.979 93.406 110.285 130.033 292.105	72.939 87.068 103.740 123.414 146.628 342.603	79.850 96.022 115.266 138.166 165.418 402.042	105.931 128.117 154.740 186.688 471.981	173.636 218.045 273.556 342.945 1054.791	285.014 371.518 483.973 630.165 2348.803

A) \$50

B) \$300

C) \$358

D) \$371

E) \$428

Answer: C

Explanation: Future Value of a series of deposits (annuity): (Exhibit 1-B in Chapter 1

appendix), $$50 \times 7.153 = $357.65 =$ approximately \$358.

Difficulty: 2 Medium Topic: Future Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.; Chapter 1 Appendix: The Time Value of Money

Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

87) You are planning to buy a house in five years. Approximately how much do you need to deposit today to have a \$10,000 down payment if your investment will make 6%?

Exhibit 1-C Present value of \$1 to be received at the end of a given number of time periods

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712
4	0.961	0.924	0.885	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033
40	0.672	0.453	0.307	0.208	0.142	0.174	0.067	0.046	0.073	0.022	0.044	0.033
50	0.608	0.372	0.228	0.141	0.142	0.054	0.034	0.021	0.032	0.009	0.005	0.003
50	0.008	0.372	0.220	0.141	0.007	0.034	0.034	0.021	0.013	0.009	0.003	0.003
Period	13%	14%	15%	16% 1	7% 1	8% 199	6 20%	25%	30%	35%	40%	50%
1	0.885	0.877	0.870	0.862	0.855			0.833 0.800			0.714	0.667
2	0.783	0.769	0.756	0,743	0.731			0.694 0.640	0.592	0.549	0.510	0.444
3	0.693	0.675	0.658	0.641	0.624			0.579 0.512		0.406	0.364	0.296
4	0.613	0.592										
5			0.5/21	0.552	0.534	0.516			0.350			0.198
	0.543		0.572	0.552	0.534		0.499	0.482 0.410	0.350	0.301	0.260	0.198
	0.543	0.519	0.497	0.476	0.456	0.437	0.499 0 0.419 0	0.482 0.410 0.402 0.328	0.269	0.301 0.223	0.260 0.186	0.132
6	0.480	0.519 0.456	0.497 0.432	0.476 0.410	0.456 0.390	0.437 0.370	0.499 0 0.419 0 0.352 0	0.482 0.410 0.402 0.328 0.335 0.262	0.269 0.207	0.301 0.223 0.165	0.260 0.186 0.133	0.132 0.088
7	0.480 0.425	0.519 0.456 0.400	0.497 0.432 0.376	0.476 0.410 0.354	0.456 0.390 0.333	0.437 0.370 0.314	0.499 0 0.419 0 0.352 0 0.296 0	0.482 0.410 0.402 0.328 0.335 0.262 0.279 0.210	0.269 0.207 0.159	0.301 0.223 0.165 0.122	0.260 0.186 0.133 0.095	0.132 0.088 0.059
6 7 8	0.480 0.425 0.376	0.519 0.456 0.400 0.351	0.497 0.432 0.376 0.327	0.476 0.410 0.354 0.305	0.456 0.390 0.333 0.285	0.437 0.370 0.314 0.266	0.499 0 0.419 0 0.352 0 0.296 0 0.249 0	0.482	0.269 0.207 0.159 0.123	0.301 0.223 0.165 0.122 0.091	0.260 0.186 0.133 0.095 0.068	0.132 0.088 0.059 0.039
6 7 8 9	0.480 0.425 0.376 0.333	0.519 0.456 0.400 0.351 0.308	0.497 0.432 0.376 0.327 0.284	0.476 0.410 0.354 0.305 0.263	0.456 0.390 0.333 0.285 0.243	0.437 0.370 0.314 0.266 0.225	0.499 0 0.419 0 0.352 0 0.296 0 0.249 0	0.482	0.269 0.207 0.159 0.123 0.094	0.301 0.223 0.165 0.122 0.091 0.067	0.260 0.186 0.133 0.095 0.068 0.048	0.132 0.088 0.059 0.039 0.026
6 7 8 9	0.480 0.425 0.376 0.333 0.295	0.519 0.456 0.400 0.351 0.308 0.270	0.497 0.432 0.376 0.327 0.284 0.247	0.476 0.410 0.354 0.305 0.263	0.456 0.390 0.333 0.285 0.243 0.208	0.437 0.370 0.314 0.266 0.225 0.191	0.499 0 0.419 0 0.352 0 0.296 0 0.249 0 0.209 0 0.176 0	0.482 0.410 0.402 0.328 0.335 0.262 0.279 0.210 0.233 0.168 0.194 0.134 0.162 0.107	0.269 0.207 0.159 0.123 0.094	0.301 0.223 0.165 0.122 0.091 0.067	0.260 0.186 0.133 0.095 0.068 0.048 0.035	0.132 0.088 0.059 0.039 0.026 0.017
6 7 8 9 10	0.480 0.425 0.376 0.333 0.295 0.261	0.519 0.456 0.400 0.351 0.308 0.270 0.237	0.497 0.432 0.376 0.327 0.284 0.247 0.215	0.476 0.410 0.354 0.305 0.263 0.227 0.195	0.456 0.390 0.333 0.285 0.243 0.208 0.178	0.437 0.370 0.314 0.266 0.225 0.191 0.162	0.499 0 0.419 0 0.352 0 0.296 0 0.249 0 0.209 0 0.176 0 0.148 0	0.482	0.269 0.207 0.159 0.123 0.094 0.073	0.301 0.223 0.165 0.122 0.091 0.067 0.050	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025	0.132 0.088 0.059 0.039 0.026 0.017
6 7 8 9 10 11	0.480 0.425 0.376 0.333 0.295 0.261 0.231	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168	0.456 0.390 0.333 0.285 0.243 0.208 0.178	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137	0.499 0.419 0.352 0.296 0.249 0.209 0.176 0.148 0.124 0.000 0.124	0.482	0.269 0.207 0.159 0.123 0.094 0.073 0.056	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008
6 7 8 9 10 11 12 13	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116	0.499 0.419 0.352 0.296 0.249 0.209 0.176 0.148 0.124 0.104	0.482 0.410 0.402 0.328 0.335 0.262 0.279 0.210 0.233 0.168 0.194 0.134 0.162 0.107 0.135 0.086 0.112 0.099 0.093 0.055	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.043	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005
6 7 8 9 10 11 12 13	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204 0.181	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163 0.141	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.125	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099	0.499 0 0.419 0 0.352 0 0.296 0 0.249 0 0.209 0 0.176 0 0.148 0 0.124 0 0.104 0 0.088 0	.482 0.410 .402 0.328 .335 0.262 .279 0.210 .233 0.168 .194 0.134 .115 0.086 .1112 0.069 .1093 0.055	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.043 0.033	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.005
6 7 8 9 10 11 12 13 14	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204 0.181 0.160	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163 0.141 0.123	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.125 0.108	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099 0.084	0.499 0.419 0.352 0.296 0.296 0.299 0.176 0.148 0.124 0.104 0.088 0.088 0.074 0.074	.482 0.410 .402 0.328 .335 0.262 .279 0.210 .233 0.168 .194 0.134 .162 0.107 .1135 0.086 .1112 0.089 .1093 0.055 .078 0.044	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.043 0.033	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009 0.000	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.003
6 7 8 9 10 11 12 13 14 15	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204 0.181 0.160 0.141	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163 0.141 0.123 0.107	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.125 0.108	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111 0.095 0.081	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099 0.084 0.071	0.499 0.419 0.352 0.296 0.299 0.209 0.176 0.148 0.144 0.104 0.088 0.074 0.062 0.074 0.062	1.482 0.410 1.402 0.328 1.335 0.262 1.279 0.210 1.233 0.168 1.194 0.134 1.162 0.107 1.135 0.086 1.112 0.069 1.078 0.045 1.078 0.045 1.065 0.035	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.043 0.033 0.025 0.020	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.003 0.002
6 7 8 9 10 11 12 13 14 15 16 17	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204 0.181 0.160 0.141 0.125	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123 0.108	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163 0.141 0.123 0.107	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.125 0.108 0.093 0.080	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111 0.095 0.081	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099 0.084 0.071 0.060	0.499 0.419 0.419 0.352 0.296 0.299 0.176 0.176 0.148 0.124 0.104 0.088 0.074 0.062 0.062 0.065 0.052 0.052	1.482 0.410 1.402 0.328 1.335 0.262 1.279 0.210 1.233 0.168 1.194 0.134 1.162 0.107 1.135 0.086 1.112 0.069 1.093 0.055 1.078 0.044 1.065 0.035 1.054 0.028	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.043 0.033 0.025 0.020 0.015	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015 0.011	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009 0.006 0.005	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.003 0.002 0.002
6 7 8 9 10 11 12 13 14 15 16 17	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204 0.181 0.160 0.141 0.125 0.111	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123 0.108	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163 0.141 0.123 0.107 0.093 0.081	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.125 0.108 0.093 0.080 0.069	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111 0.095 0.061 0.069	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099 0.084 0.071 0.060 0.051	0.499	1.482 0.410 1.402 0.328 1.335 0.262 1.279 0.210 1.233 0.168 1.194 0.134 1.162 0.107 1.135 0.086 1.112 0.069 1.093 0.055 1.078 0.044 1.065 0.035 1.054 0.023 1.038 0.045	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.043 0.033 0.025 0.020 0.015	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015 0.011	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009 0.006 0.005 0.003	0.132 0.088 0.059 0.039 0.017 0.012 0.008 0.005 0.003 0.002 0.002 0.001
6 7 8 9 10 11 12 13 14 15 16 17 18 19	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204 0.181 0.160 0.141 0.125 0.111 0.098	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123 0.108 0.095 0.083	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163 0.141 0.123 0.107 0.093 0.081	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.125 0.108 0.093 0.080 0.069	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111 0.095 0.081 0.069 0.059	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099 0.084 0.071 0.060 0.051	0.499 0.419 0.319 0.419 0.352 0.296 0.249 0.209 0.209 0.176 0.148 0.014 0.088 0.0074 0.062 0.052 0.052 0.052 0.004 0.037 0.064 0.037 0.064 0.037 0.064 0.037 0.065 0.055 0.055 0.064 0.037 0.067	.482 0.410 .402 0.328 .335 0.262 .279 0.210 .233 0.168 .194 0.134 .1162 0.107 .135 0.086 .1112 0.069 .0093 0.055 .0078 0.044 .0.065 0.035 .054 0.028 .045 0.023	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.043 0.033 0.025 0.020 0.015 0.012	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015 0.011 0.008 0.006 0.005	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009 0.006 0.005 0.003 0.002	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.003 0.002 0.002
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	0.480 0.425 0.376 0.333 0.295 0.261 0.231 0.204 0.181 0.160 0.141 0.125 0.111	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123 0.108 0.095 0.083	0.497 0.432 0.376 0.327 0.284 0.215 0.187 0.163 0.141 0.123 0.107 0.093 0.081 0.070	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.125 0.108 0.093 0.080 0.069 0.060	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111 0.095 0.069 0.059 0.059	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099 0.084 0.071 0.060 0.051 0.043	0.499	1.482 0.410 1.402 0.328 1.335 0.262 1.279 0.210 1.233 0.168 1.194 0.134 1.162 0.107 1.135 0.086 1.112 0.069 1.078 0.045 1.078 0.044 1.065 0.035 1.054 0.028 1.038 0.018 1.038 0.018	0.269 0.200 0.159 0.123 0.094 0.073 0.056 0.043 0.033 0.025 0.020 0.011 0.012 0.009	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.011 0.008 0.006 0.005	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009 0.006 0.005 0.003 0.002 0.002	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.007 0.0010 0.0010 0.0010 0.0010 0.0010
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 25	0.480 0.425 0.376 0.336 0.295 0.261 0.231 0.204 0.181 0.160 0.441 0.125 0.098 0.087	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123 0.108 0.095 0.083 0.073	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.163 0.141 0.123 0.107 0.093 0.081 0.070 0.061	0.476 0.410 0.354 0.305 0.227 0.195 0.145 0.145 0.108 0.093 0.080 0.069 0.060 0.051	0.456 0.390 0.393 0.285 0.208 0.178 0.178 0.152 0.130 0.111 0.095 0.081 0.069 0.059 0.051 0.043 0.020	0.437 0.370 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.099 0.084 0.071 0.060 0.051 0.043 0.037 0.016	0.499 C 0.419	1.482 0.410 1.402 0.328 1.335 0.262 1.279 0.210 1.233 0.168 1.194 0.134 1.162 0.107 1.135 0.086 1.112 0.069 1.078 0.044 1.065 0.035 1.078 0.044 1.065 0.035 1.045 0.033 1.045 0.033 1.031 0.014 1.026 0.012	0.269 0.207 0.159 0.123 0.094 0.073 0.056 0.042 0.033 0.025 0.020 0.011 0.009 0.007 0.009	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015 0.011 0.008 0.006 0.005 0.003	0.260 0.186 0.133 0.095 0.068 0.035 0.025 0.018 0.013 0.009 0.006 0.005 0.003 0.002 0.001	0.132 0.088 0.059 0.039 0.017 0.012 0.008 0.005 0.003 0.002 0.002 0.001
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 25 30	0.480 0.425 0.376 0.336 0.295 0.261 0.231 0.204 0.181 0.160 0.141 0.125 0.111 0.098 0.087	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123 0.108 0.095 0.083 0.073 0.038	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.187 0.163 0.141 0.123 0.107 0.093 0.081 0.070 0.030 0.015	0.476 0.410 0.354 0.305 0.263 0.227 0.195 0.168 0.145 0.108 0.093 0.080 0.069 0.051 0.024 0.012	0.456 0.390 0.333 0.285 0.243 0.208 0.178 0.152 0.130 0.111 0.095 0.081 0.069 0.059 0.051 0.043 0.020 0.009	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.071 0.084 0.071 0.060 0.051 0.043 0.037 0.016	0.499	.482 0.410 .402 0.328 .335 0.262 .279 0.210 .233 0.168 .194 0.134 .1162 0.107 .135 0.086 .1112 0.069 .0078 0.044 .0065 0.033 .054 0.028 .0045 0.038 0.018 .0046 0.012 .0056 0.012 .0010 0.004	0.269 0.207 0.155 0.122 0.094 0.073 0.056 0.043 0.033 0.025 0.025 0.020 0.015 0.010 0.007	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.015 0.011 0.008 0.006 0.005 0.003	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009 0.006 0.005 0.003 0.002 0.001 0	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.005 0.003 0.002 0.001 0.001 0.001 0.001
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	0.480 0.425 0.376 0.336 0.295 0.261 0.231 0.204 0.181 0.160 0.441 0.125 0.098 0.087	0.519 0.456 0.400 0.351 0.308 0.270 0.237 0.208 0.182 0.160 0.140 0.123 0.108 0.095 0.083 0.073	0.497 0.432 0.376 0.327 0.284 0.247 0.215 0.163 0.141 0.123 0.107 0.093 0.081 0.070 0.061	0.476 0.410 0.354 0.305 0.227 0.195 0.145 0.145 0.108 0.093 0.080 0.069 0.060 0.051	0.456 0.390 0.393 0.285 0.208 0.178 0.178 0.152 0.130 0.111 0.095 0.081 0.069 0.059 0.051 0.043 0.020	0.437 0.370 0.314 0.266 0.225 0.191 0.162 0.137 0.116 0.071 0.084 0.071 0.060 0.051 0.043 0.037 0.016	0.499	1.482 0.410 1.402 0.328 1.335 0.262 1.279 0.210 1.233 0.168 1.194 0.134 1.162 0.107 1.135 0.086 1.112 0.069 1.078 0.044 1.065 0.035 1.078 0.044 1.065 0.035 1.045 0.033 1.045 0.033 1.031 0.014 1.026 0.012	0.269 0.207 0.159 0.129 0.094 0.073 0.033 0.025 0.020 0.011 0.012 0.005 0.007	0.301 0.223 0.165 0.122 0.091 0.067 0.050 0.037 0.027 0.020 0.011 0.008 0.006 0.005 0.003 0.0001 0.0001 0.0001 0.0001	0.260 0.186 0.133 0.095 0.068 0.048 0.035 0.025 0.018 0.013 0.009 0.006 0.005 0.003 0.002 0.001 0 0	0.132 0.088 0.059 0.039 0.026 0.017 0.012 0.008 0.005 0.007 0.0010 0.0010 0.0010 0.0010 0.0010

A) \$6,000

B) \$6,590

C) \$7,470

D) \$9,400

E) \$10,000

Answer: C

Explanation: Present Value of a single amount (Exhibit 1-C in Chapter 1 appendix), \$10,000 ×

0.747 = \$7,470. Difficulty: 2 Medium Topic: Present Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.; Chapter 1 Appendix: The Time Value of Money

Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

88) Benjamin is planning to go to graduate school in a program that will take three years. Benjamin wants to have \$10,000 available each year for his school and living expenses. If he earns 6% on his investments, approximately how much must be deposited at the start of his studies for him to withdraw \$10,000 a year for three years?

Period	1%	2%	3%	4%	5%	6%	7	%	8%	9%	10%	11%	12%
1	0.990	0.980	0.97	0.962	0.95	52 0.9	43	0.935	0.926	0.917	0.909	0.901	0.8
2	1.970	1.942	1.913	1.886	1.85	59 1.8	33	1.808	1.783	1.759	1.736	1.713	1.6
3	2.941	2.884	2.829	2.775	2.72	23 2.6	73	2.624	2.577	2.531	2.487	2.444	2.4
4	3.902	3.808	3.717	3.630	3.54	46 3.4	65	3.387	3.312	3.240	3.170	3.102	3.0
5	4.853	4.713			4.32			4.100	3.993	3.890	3.791	3.696	3.6
6	5.795	5.601			5.07			4.767	4.623	4.486	4.355	4.231	4.3
7	6.728	6.472			5.78			5.389	5.206	5.033	4.868	4.712	4.
8	7.652	7.325			6.46			5.971	5.747	5.535	5.335	5.146	4.
9	8.566	8.162			7.10			6.515	6.247	5.995	5.759	5.537	5.
10	9.471	8.983			7.72			7.024	6.710	6.418	6.145	5.889	5.
11	10.368	9.787			8.30			7.499	7.139	6.805	6.495	6.207	5.
12	11.255	10.575			8.86			7.943	7.536	7.161	6.814	6.492	6.
13	12.134	11.348			9.39			8.358	7.904	7.487	7.103	6.750	6
14	13.004	12.106			9.89			8.745	8.244	7.786	7.367	6.982	6
15	13.865	12.849			10.38			9.108	8.559	8.061	7.606	7.191	6
16	14.718	13.578			10.83			9.447	8.851	8.313	7.824	7.379	6
17	15.562	14.292			11.27			9.763	9.122	8.544	8.022	7.549	7
18	16.398	14.992			11.69			10.059	9.372	8.756	8.201	7.702	7
19	17.226	15.678			12.08			10.336	9.604	8.950	8.365	7.839 7.963	7
25	18.046	16.351			12.46			10.594	9.818	9.129	8.514		7
30	22.023 25.808	19.523			14.09			11.654	10.675	9.823	9.077	8.422 8.694	8
40	32.835	27.355			17.15			13.332	11.925	10.757	9.427	8.951	8
50	39.196	31,424			18.25			13.801	12.233	10.757	9.779	9.042	8
30	39.190	31,424	25.750	21,402	10.2.	50 15.7	02	13.001	12.233	10.902	9.913	9.042	0.
eriod	13%												
		14%	15%		17%		19%	20%	25%	30%	35%	40%	50%
1	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	0.800	0.769	0.741	0.714	0
2	0.885 1.668	0.877 1.647	0.870 1.626	0.862 1.605	0.855 1.585	0.847 1.566	0.840 1.547	0.833 1.528	0.800 1.440	0.769 1.361	0.741 1.289	0.714 1.224	0
3	0.885 1.668 2.361	0.877 1.647 2.322	0.870 1.626 2.283	0.862 1.605 2.246	0.855 1.585 2.210	0.847 1.566 2.174	0.840 1.547 2.140	0.833 1.528 2.106	0.800 1.440 1.952	0.769 1.361 1.816	0.741 1.289 1.696	0.714 1.224 1.589	1
3 4	0.885 1.668 2.361 2.974	0.877 1.647 2.322 2.914	0.870 1.626 2.283 2.855	0.862 1.605 2.246 2.798	0.855 1.585 2.210 2.743	0.847 1.566 2.174 2.690	0.840 1.547 2.140 2.639	0.833 1.528 2.106 2.589	0.800 1.440 1.952 2.362	0.769 1.361 1.816 2.166	0.741 1.289 1.696 1.997	0.714 1.224 1.589 1.849	0 1 1
2 3 4 5	0.885 1.668 2.361 2.974 3.517	0.877 1.647 2.322 2.914 3.433	0.870 1.626 2.283 2.855 3.352	0.862 1.605 2.246 2.798 3.274	0.855 1.585 2.210 2.743 3.199	0.847 1.566 2.174 2.690 3.127	0.840 1.547 2.140 2.639 3.058	0.833 1.528 2.106 2.589 2.991	0.800 1.440 1.952 2.362 2.689	0.769 1.361 1.816 2.166 2.436	0.741 1.289 1.696 1.997 2.220	0.714 1.224 1.589 1.849 2.035	0 1 1 1
2 3 4 5 6	0.885 1.668 2.361 2.974 3.517 3.998	0.877 1.647 2.322 2.914 3.433 3.889	0.870 1.626 2.283 2.855 3.352 3.784	0.862 1.605 2.246 2.798 3.274 3.685	0.855 1.585 2.210 2.743 3.199 3.589	0.847 1.566 2.174 2.690 3.127 3.498	0.840 1.547 2.140 2.639 3.058 3.410	0.833 1.528 2.106 2.589 2.991 3.326	0.800 1.440 1.952 2.362 2.689 2.951	0.769 1.361 1.816 2.166 2.436 2.643	0.741 1.289 1.696 1.997 2.220 2.385	0.714 1.224 1.589 1.849 2.035 2.168	0 1 1 1 1
2 3 4 5 6 7	0.885 1.668 2.361 2.974 3.517 3.998 4.423	0.877 1.647 2.322 2.914 3.433 3.889 4.288	0.870 1.626 2.283 2.855 3.352 3.784 4.160	0.862 1.605 2.246 2.798 3.274 3.685 4.039	0.855 1.585 2.210 2.743 3.199 3.589 3.922	0.847 1.566 2.174 2.690 3.127 3.498 3.812	0.840 1.547 2.140 2.639 3.058 3.410 3.706	0.833 1.528 2.106 2.589 2.991 3.326 3.605	0.800 1.440 1.952 2.362 2.689 2.951 3.161	0.769 1.361 1.816 2.166 2.436 2.643 2.802	0.741 1.289 1.696 1.997 2.220 2.385 2.508	0.714 1.224 1.589 1.849 2.035 2.168 2.263	1 1 1 1
2 3 4 5 6 7 8	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925	0.741 1.289 1.696 1.997 2.220 2.385 2.508	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331	0 1 1 1 1 1 1
2 3 4 5 6 7 8 9	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019	0.741 1.289 1.696 1.997 2.220 2.385 2.508 2.598 2.665	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379	1 1 1 1 1 1
2 3 4 5 6 7 8 9	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092	0.741 1.289 1.696 1.997 2.220 2.385 2.508 2.598 2.665 2.715	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414	1 1 1 1 1 1 1 1 1 1 1 1
2 3 4 5 6 7 8 9 10	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453	0.870 1,626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659 4.836	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571 3.656	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147	0.741 1.289 1.696 1.997 2.220 2.385 2.508 2.598 2.665 2.715	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 3 4 5 6 7 8 9 10 11	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.660	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659 4.836 4.988	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571 3.656	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190	0.741 1.289 1.696 1.997 2.220 2.385 2.508 2.598 2.665 2.715 2.752	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 3 4 5 6 7 8 9 10 11 12	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.660 5.842	0.870 1.626 2.283 2.885 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421 5.583	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659 4.836 4.988 5.118	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571 3.656 3.725 3.780	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223	0.741 1.289 1.696 1.997 2.220 2.385 2.508 2.665 2.715 2.752 2.779 2.799	0.714 1.224 1.589 1.889 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 3 4 5 6 7 8 9 10 11 12 13	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918 6.122 6.302	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.660 5.842 6.002	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.468	0.855 1,585 2,210 2,743 3,199 3,589 3,922 4,207 4,451 4,659 4,836 4,988 5,118 5,229	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439 4.533 4.611	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571 3.656 3.725 3.780	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223	0.741 1.289 1.696 1.997 2.220 2.385 2.508 2.598 2.665 2.715 2.752 2.779 2.814	0.714 1.224 1.589 1.889 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 3 4 5 6 7 8 9 10 11 11 12 13 14	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918 6.122 6.302	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.660 5.842 6.002 6.142	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724 5.847	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.468 5.575	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659 4.836 4.988 5.118 5.229 5.324	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008 5.092	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715 4.802 4.876	0.833 1,528 2,106 2,589 2,991 3,326 3,605 3,837 4,031 4,192 4,327 4,439 4,533 4,611 4,675	0.800 1,440 1,952 2,362 2,689 2,951 3,161 3,329 3,463 3,571 3,656 3,725 3,780 3,824 3,859	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223 3.249 3.268	0.741 1.289 1.696 1.997 2.220 2.385 2.598 2.665 2.715 2.752 2.779 2.799 2.814 2.825	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 3 4 5 6 7 8 9 10 11 11 12 13 14 15	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918 6.122 6.302 6.462 6.604	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.660 5.842 6.002 6.142 6.265	0.870 1.626 2.283 2.855 3.352 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724 5.847	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.468 5.575 5.668	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659 4.836 4.988 5.118 5.229 5.324 5.405	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008 5.009 5.162	0.840 1.547 2.140 2.639 3.058 3.410 3.954 4.163 4.339 4.486 4.611 4.715 4.802 4.876	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439 4.533 4.611 4.675 4.730	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571 3.656 3.725 3.780 3.824 3.859 3.887	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223 3.249 3.268	0.741 1.289 1.696 1.997 2.220 2.385 2.508 2.508 2.598 2.665 2.715 2.752 2.779 2.799 2.814 2.825 2.834	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478 2.484 2.489	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 6.122 6.302 6.462 6.604 6.729	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.660 5.842 6.002 6.142 6.265 6.373	0.870 1.626 2.283 2.855 3.352 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724 5.847 5.847 5.954	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.468 5.575 5.668	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659 4.836 4.988 5.118 5.229 5.324 5.405 5.475	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008 5.092 5.162 5.222	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715 4.802 4.876 4.938 4.990	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439 4.533 4.611 4.675 4.730	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571 3.656 3.725 3.780 3.824 3.859 3.819	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223 3.249 3.268 3.283 3.295	0,741 1,289 1,696 1,997 2,220 2,385 2,508 2,508 2,558 2,665 2,715 2,779 2,799 2,814 2,825 2,834 2,840	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478 2.489 2.489	11 11 11 11 11 11 11 11 11 11 11 11 11
2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918 6.122 6.302 6.462 6.604 6.729 6.840	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.216 5.453 5.660 5.842 6.002 6.142 6.265 6.373 6.467	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724 5.847 5.954 6.047	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.668 5.775 5.668 5.749	0.855 1.585 2.210 2.743 3.199 3.589 3.529 4.207 4.451 4.659 4.836 4.988 5.118 5.129 5.229 5.324 5.405 5.475 5.534	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008 5.092 5.162 5.222	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715 4.802 4.876 4.938 4.990 5.033	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439 4.533 4.611 4.675 4.730	0.800 1.440 1.952 2.362 2.689 2.951 3.161 3.329 3.463 3.571 3.656 3.725 3.780 3.824 3.859 3.887 3.910 3.928	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223 3.249 3.268 3.283 3.295 3.304	0,741 1,289 1,696 1,997 2,220 2,385 2,508 2,665 2,715 2,752 2,779 2,799 2,814 2,825 2,834 2,844	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478 2.484 2.489 2.492	
2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918 6.122 6.302 6.462 6.004 6.729 6.840 6.938	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.650 5.842 6.002 6.142 6.255 6.373 6.467	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724 5.847 5.954 6.047 6.128	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.468 5.575 5.668 5.7749 5.818	0.855 1.585 2.210 2.743 3.199 3.392 4.207 4.451 4.659 4.836 4.936 5.118 5.229 5.324 5.405 5.475 5.534	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008 5.092 5.162 5.222 5.273 5.316	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715 4.802 4.876 4.938 4.990 5.033 5.070	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439 4.533 4.611 4.675 4.730 4.775 4.781	0.800 1.440 1.952 2.362 2.951 3.161 3.329 3.463 3.571 3.656 3.725 3.780 3.824 3.859 3.897 3.910	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223 3.249 3.263 3.283 3.295 3.304 3.311	0,741 1,289 1,696 1,997 2,220 2,385 2,508 2,655 2,715 2,779 2,779 2,779 2,814 2,825 2,834 2,840 2,844	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478 2.484 2.489 2.492 2.494 2.496	
2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 6.122 6.302 6.462 6.604 6.729 6.840 6.938 7.025	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.660 5.842 6.002 6.142 6.653 6.633 6.653	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724 5.847 5.954 6.047 6.128 6.198	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.668 5.575 5.668 5.749 5.818 5.877	0.855 1.585 2.210 2.743 3.199 3.922 4.451 4.659 4.451 4.659 4.836 5.118 5.229 5.324 5.475 5.534 5.534	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008 5.092 5.162 5.222 5.273 5.316	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715 4.802 4.876 4.938 4.990 5.033 5.070 5.101	0.833 1.528 2.106 2.589 2.99 2.91 3.926 3.605 3.605 4.031 4.192 4.327 4.439 4.533 4.611 4.675 4.730 4.775 4.812 4.812	0.800 1.440 1.1952 2.362 2.951 3.161 3.329 3.463 3.571 3.725 3.780 3.887 3.887 3.910 3.928 3.928	0.769 1.361 1.816 2.166 2.436 2.436 2.432 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.802 2.803 3.092 3.203 3.204 3.203 3.205 3.304 3.311 3.316	0,741 1,289 1,696 1,997 2,220 2,385 2,508 2,508 2,665 2,715 2,779 2,799 2,814 2,825 2,834 2,844 2,840 2,844 2,848	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478 2.478 2.484 2.489 2.494 2.492 2.494	00 11 11 11 11 11 11 11 11 11 11 11 11
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426 5.687 5.918 6.122 6.302 6.462 6.004 6.729 6.840 6.938	0.877 1.647 2.322 2.914 3.433 3.889 4.288 4.639 4.946 5.216 5.453 5.650 5.842 6.002 6.142 6.255 6.373 6.467	0.870 1.626 2.283 2.855 3.352 3.784 4.160 4.487 4.772 5.019 5.234 5.421 5.583 5.724 5.847 5.954 6.047 6.128	0.862 1.605 2.246 2.798 3.274 3.685 4.039 4.344 4.607 4.833 5.029 5.197 5.342 5.468 5.575 5.668 5.7749 5.818	0.855 1.585 2.210 2.743 3.199 3.392 4.207 4.451 4.659 4.836 4.936 5.118 5.229 5.324 5.405 5.475 5.534	0.847 1.566 2.174 2.690 3.127 3.498 3.812 4.078 4.303 4.494 4.656 4.793 4.910 5.008 5.092 5.162 5.222 5.273 5.316	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715 4.802 4.876 4.938 4.990 5.033 5.070	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327 4.439 4.533 4.611 4.675 4.730 4.775 4.781	0.800 1.440 1.952 2.362 2.951 3.161 3.329 3.463 3.571 3.656 3.725 3.780 3.824 3.859 3.897 3.910	0.769 1.361 1.816 2.166 2.436 2.643 2.802 2.925 3.019 3.092 3.147 3.190 3.223 3.249 3.263 3.283 3.295 3.304 3.311	0,741 1,289 1,696 1,997 2,220 2,385 2,508 2,655 2,715 2,779 2,779 2,779 2,814 2,825 2,834 2,840 2,844	0.714 1.224 1.589 1.849 2.035 2.168 2.263 2.331 2.379 2.414 2.438 2.456 2.469 2.478 2.484 2.489 2.492 2.494 2.496	

A) \$10,000

B) \$18,390

C) \$26,730

D) \$29,100

E) \$30,000

Answer: C

Explanation: Present Value of a series of deposits (annuity): (Exhibit 1-D in Chapter 1

appendix), $$10,000 \times 2.673 = $26,730$

Difficulty: 2 Medium Topic: Present Value

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.; Chapter 1 Appendix: The Time Value of Money

Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 89) Natalie Smith's new job is very demanding. She regularly works long hours and on the weekends. As a result, Natalie has not had much time for her family and friends. This is an example of:
- A) deflation.
- B) financial opportunity cost.
- C) personal opportunity cost.
- D) time value of money.
- E) inflation.

Answer: C

Difficulty: 2 Medium

Topic: Opportunity Costs

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 90) During ______, even though prices decline, spending slows because consumers expect prices to continue to decline.
- A) deflation
- B) depreciation
- C) appreciation
- D) economic recovery
- E) inflation

Answer: A

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 91) Financial institutions include the following:
- A) banks.
- B) credit unions.
- C) insurance companies.
- D) investment companies.
- E) All of these.

Answer: E
Difficulty: 1 Easy

Topic: Financial institutions

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 92) More recently, the annual price increase for most goods and services as measured by the consumer price index has been less than ______ percent.
- A) 1
- B) 2
- C) 3
- D) 4
- E) 5

Answer: B

Difficulty: 2 Medium

Topic: Economic conditions and factors; Financial system

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 93) Increased home building results in:
- A) increased job opportunities.
- B) higher wages.
- C) increased consumer spending.
- D) overall economic expansion.
- E) All of these.

Answer: E

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 94) Developing financial goals is the step in the financial planning process.
- A) first
- B) second
- C) third
- D) fourth
- E) fifth

Answer: B

Difficulty: 2 Medium

Topic: Financial Planning Process; Financial Goals

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 95) The following are examples of intangible-purchase goals, except:
- A) obtaining a college degree.
- B) going on a cruise vacation.
- C) buying a house.
- D) losing weight.
- E) getting more sleep.

Answer: C Difficulty: 1 Easy

Topic: Financial Goals

Learning Objective: 01-03 Develop personal financial goals.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 96) Developing and using a budget is part of which component of financial planning?
- A) Retirement and estate planning
- B) Investing
- C) Spending
- D) Managing risk
- E) Planning

Answer: E

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 97) Determining your current financial situation is a part of which step in the financial planning process?
- A) First
- B) Second
- C) Third
- D) Fourth
- E) Fifth

Answer: A

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 98) Evaluating risk associated with making most financial decisions is difficult because of what factor(s)?
- A) Inflation risk
- B) Interest rate risk
- C) Personal risk
- D) Liquidity risk
- E) All of these.

Answer: E Difficulty: 1 Easy

Topic: Financial Planning Process; Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 99) Financial planning information sources generally do not include:
- A) print media
- B) financial specialists
- C) financial institutions
- D) personal friends
- E) digital media

Answer: D

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 100) Inflation risk may include changes in buying power and:
- A) rising prices.
- B) falling prices.
- C) decisions to buy later.
- D) decisions to buy now.
- E) All of these.

Answer: E

Difficulty: 2 Medium

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 101) Types of risks associated with financial decisions may include:
- A) Income risk
- B) Personal risk
- C) Liquidity risk
- D) Inflation risk
- E) All of these

Answer: E

Difficulty: 2 Medium

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 102) Developing financial goals does not involve:
- A) Analyzing your financial values several times a year
- B) Differentiating your needs from your wants
- C) Allowing others to decide which goals you should pursue
- D) Creating specific financial goals
- E) None of these

Answer: C

Difficulty: 2 Medium

Topic: Financial Planning Process; Financial Goals

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 103) Analyzing your current financial position is a part of which step of the financial planning process:
- A) Step 1, Determine current financial situation
- B) Step 2, Develop financial goals
- C) Step 3, Identify alternative courses of action
- D) Step 4, Evaluate alternatives
- E) Step 5, Create and implement the action plan

Answer: A Difficulty: 1 Easy

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 104) The advantages of personal financial planning include:
- A) Increased effectiveness in obtaining, using and protecting your financial resources
- B) Increased control of your financial affairs by avoiding excessive debt and bankruptcy
- C) Improved personal relationships resulting from better communicated financial decisions
- D) All of these
- E) None of these

Answer: D

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 105) Personal financial activities involve the following main decision areas:
- A) Spending
- B) Saving
- C) Sharing
- D) All of these
- E) None of these

Answer: D

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

106) When identifying alternative courses of action, possible courses of action include:

- A) Continue with the same course of action
- B) Expand the past situation
- C) Change the past situation
- D) Take an old course of action
- E) All of these

Answer: A

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 107) If you are concerned about year-end tax payments and need an action plan, you may take the following action(s):
- A) increase the amount withheld from each paycheck
- B) file quarterly tax payments
- C) shelter current income in a tax-deferred retirement program
- D) invest in tax-exempt securities
- E) All of these

Answer: E

Difficulty: 2 Medium

Topic: Financial Planning Process; Financial situation analysis

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 108) The appropriate path for daily money decisions will:
- A) take some time
- B) take some effort
- C) result in lower stress
- D) result in personal financial security
- E) all of these

Answer: E

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 109) The earnings you receive as a saver or an investor reflect:
- A) past interest rates
- B) a risk premium based on length of the savings period
- C) expected deflation
- D) the extent of certainty about getting your money back
- E) a positive credit rating

Answer: B

Difficulty: 2 Medium

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 110) In most societies, the forces of ______ set prices for securities, goods, and services.
- A) supply and demand
- B) inflation
- C) business
- D) government
- E) foreign competition

Answer: A Difficulty: 1 Easy

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

- 111) A security is a financial instrument and includes all of the following, except:
- A) bonds
- B) stocks
- C) certificates of deposit
- D) mutual funds
- E) rare coins

Answer: E Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

- 112) Robo-advisors, 3-D printing, robotics, wearable technology, and other innovations will influence your financial decisions in the following ways, except:
- A) how you earn
- B) how you spend
- C) how you invest
- D) how you travel
- E) how you save

Answer: D

Difficulty: 2 Medium

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: automatic

113) Describe the S-M-A-R-T approach to developing financial goals. Give an example.

Answer: Financial Goals should be specific, measurable, action-oriented, realistic and time-

based. Examples will vary.

Difficulty: 2 Medium

Topic: Financial Goals; SMART approach

Learning Objective: 01-03 Develop personal financial goals.

Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: manual

114) What are the eight Components of Financial Planning?

Answer: The main Components of Financial Planning are obtaining, planning, saving,

borrowing, spending, managing risk, investing, and retirement/estate planning.

Difficulty: 2 Medium

Topic: Components of Financial Planning

Learning Objective: 01-05 Identify strategies for achieving personal financial goals for

different life situations. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

115) People are commonly overwhelmed by the many influences on personal financial decisions. What are the factors affecting personal financial planning?

Answer: Students answers will vary. Factors might include life situation and personal values. Life situation is affected by personal factors such as household size, age, income,, personal beliefs, and the adult life cycle. The adult life cycle is the stages in the family and financial needs of an adult. The financial system and daily economic activities also influence financial planning. The global economy, foreign investors, and competition are also important influences.

Difficulty: 2 Medium

Topic: Life Cycle; Personal values; Life events and their effects

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: manual

116) What types of risks are commonly associated with personal financial decisions? How can these risks be evaluated and minimized to reduce personal and financial difficulties?

Answer: Common risks are inflation risk, interest rate risk, income risk, personal risk, and liquidity risk. Risks can be evaluated and minimized by gathering information based on your experience and the experience of others and using financial planning information sources.

Difficulty: 2 Medium

Topic: Investment risks and measures

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: manual

117) Natalie Smith is trying to decide whether to keep her money in a savings account or in a mutual fund. What would you tell her to help her analyze her decision?

Answer: Students answers will vary. Suggested responses might mention gathering information, comparing alternatives, analyzing risks, assessing personal goals, and contacting financial planning specialists.

Difficulty: 2 Medium

Topic: Financial Planning Process; Financial situation analysis

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

118) What are the six steps in the financial planning process?

Answer: The personal financial planning process involves: (1) determine your current financial situation, (2) develop financial goals, (3) identify alternative courses of action, (4) evaluate your alternatives, (5) create and implement a financial action plan, and (6) review and revise the financial plan.

Difficulty: 1 Easy

Topic: Financial Planning Process

Learning Objective: 01-01 Analyze the process for making personal financial decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: manual

119) Explain why borrowers benefit more than lenders in times of high inflation.

Answer: Inflation can adversely affect lenders of money. Unless an adequate interest rate is charged, amounts repaid by borrowers in times of inflation have less buying power than the money they borrowed. If you pay 4 percent interest on a loan and the inflation rate is 6 percent, the dollars you pay the lender have lost buying power.

Difficulty: 3 Hard

Topic: Economic conditions and factors

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Understand

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: manual

120) What is meant by the term "Time Value of Money"?

Answer: Time value of money refers to the increase of an amount of money as a result of interest earned. You can calculate the increased value of your money in two ways: You can calculate the total amount that will be available later (future value) or you can determine the current value of an amount desired in the future (present value). Future value and present value can both be calculated by using a single sum or a series of deposits or payments (annuity).

Difficulty: 2 Medium

Topic: Time value of money - interest rates and inflation

Learning Objective: 01-04 Calculate time value of money to analyze personal financial

decisions.

Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible

121) Describe the relationship between the annual inflation rate and prices using the Rule of 72.

Answer: The Rule of 72 helps determine how fast prices (or your savings) will double using the following formula: 72 / annual inflation rate = number of years it takes to double prices (or your savings).

Difficulty: 3 Hard

Topic: Economic conditions and factors; Time value of money - interest rates and inflation Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning. Bloom's: Apply

Accessibility: Keyboard Navigation; Screen Reader Compatible

Gradable: manual

122) Many events affect your life situation and occur within the adult life cycle. List five events.

Answer: Answers will vary.

Graduation (at all education levels)

Engagement and marriage

The birth or adoption of a child

A career change or a move to a new area

Dependent children leaving home

Changes in health

Divorce

Retirement

The death of a spouse, family member, or other dependent

Difficulty: 2 Medium

Topic: Life Cycle; Life events and their effects

Learning Objective: 01-02 Assess personal and economic factors that influence personal

financial planning.
Bloom's: Remember

Accessibility: Keyboard Navigation; Screen Reader Compatible