

1. What is the rule in words? What is the output when the input is 100? Write the rule as an equation.

Input, x	7	8	9	100
Output, y	5	6	7	?

- A) The output is five less than the input; 95; $y = x - 5$
B) The output is seven less than the input; 93; $y = x - 7$
C) The output is six less than the input; 94; $y = x - 6$
D) The output is two less than the input; 98; $y = x - 2$
E) The output is six less than the input; 94; $y = x - 6$

Ans: D

Difficulty: Medium

Exercise Group: 1-4

Learning Objective: Problem-Solving Steps and Strategies

Section: 1.1

Similar To Exercise: 1.1.3

Type: Concept

2. Read "What to Expect from This Text" and "Beginning the New Term: First Day"

What are three alternative approaches to thinking algebraically?

- A) verbal
B) visual
C) kinesthetic
D) all the above
E) none of these

Ans: D

Difficulty: Easy

Exercise Group: 9-15

Learning Objective: Problem-Solving Steps and Strategies

Section: 1.1

Similar To Exercise: 1.1.9

Type: Skill

3. Calculate the course load for student with the following schedule:
18 credit hours and 26 hours of employment.

- A) 80
- B) 46
- C) 98
- D) 44
- E) 62

Ans: A

Difficulty: Easy

Exercise Group: 13

Learning Objective: Problem-Solving Steps and Strategies

Section: 1.1

Similar To Exercise: 1.1.13a

Type: Skill

4. Calculate the course load for student with the following schedule:
18 credit hours and no hours of employment.

- A) 23
- B) 36
- C) 54
- D) 13
- E) 72

Ans: C

Difficulty: Easy

Exercise Group: 13

Learning Objective: Problem-Solving Steps and Strategies

Section: 1.1

Similar To Exercise: 1.1.13b

Type: Concept

5. Calculate the course load for student with the following schedule:
13 credit hours and 20 hours of employment.

- A) 19
- B) 36
- C) 86
- D) 59
- E) 99

Ans: D

Difficulty: Medium

Exercise Group: 13

Learning Objective: Problem-Solving Steps and Strategies

Section: 1.1

Similar To Exercise: 1.1.13c

Type: Concept

6. Kelsey is setting up the Events Center for a petting zoo. She builds the pens along a long wall. She starts in a corner, making the first pen with two panels and needing two more panels for each additional pen. Build an input-output table for the number of panels needed for 1 to 5 pens. How many panels are needed for 10 pens?

- A) 10 panels
- B) 16 panels
- C) 20 panels
- D) 19 panels
- E) 21 panels

Ans: C

Difficulty: Easy

Exercise Group: 5-8

Learning Objective: Build an input-output table from a problem setting.

Section: 1.2

Similar To Exercise: 1.2.8

Type: Concept

7. Make an input-output for the following tuition model: Tuition is \$55 per credit hour for 1 to 11 hours; \$1050 for 12 to 18 hours; and an additional \$30 per credit hour for each hour above 18 hours. Stop at 20 hours. Use your table to find the tuition cost for 8 hours, 13 hours, and 20 hours.

- A) \$440, \$715, \$1100
- B) \$55, \$1050, \$30
- C) \$55, \$1050, \$1080
- D) \$240, \$390, \$600
- E) \$440, \$1050, \$1110

Ans: E

Difficulty: Easy

Exercise Group: 1-4

Learning Objective: Build an input-output table from a problem setting.

Section: 1.2

Similar To Exercise: 1.2.3

Type: Concept

8. When we combine the even numbers and the odd numbers, we get which set of real numbers?

- A) natural numbers
- B) integers
- C) negative real numbers
- D) rational numbers
- E) irrational numbers

Ans: B

Difficulty: Easy

Exercise Group: 17-20

Learning Objective: Apply correct language for sets of numbers.

Section: 1.2

Similar To Exercise: 1.2.17

Type: Concept

9. From the set $\left\{\frac{4}{5}, -4, 0, 4, 3\right\}$, select a number that fits the statement below.

This rational number is not defined in the set of integers.

- A) -4
- B) 4
- C) 3
- D) 0
- E) $\frac{4}{5}$

Ans: E

Difficulty: Easy

Exercise Group: 17-20

Learning Objective: Apply correct language for sets of numbers.

Section: 1.2

Similar To Exercise: 1.2.18

Type: Concept

10. Change the following fraction into a mixed number.

$$\frac{16}{9}$$

- A) $1\frac{7}{9}$
- B) $1\frac{1}{9}$
- C) $1\frac{2}{9}$
- D) $2\frac{8}{9}$
- E) $2\frac{5}{9}$

Ans: A

Difficulty: Easy

Exercise Group: 21-30

Learning Objective: Convert an improper fraction into a mixed number

Section: 1.2

Similar To Exercise: 1.2.25

Type: Skill

11. Add:

$$\frac{5}{8} + \frac{11}{16}$$

A) $1\frac{5}{24}$

B) $\frac{13}{8}$

C) $\frac{5}{16}$

D) $1\frac{5}{16}$

E) $2\frac{5}{16}$

Ans: D

Difficulty: Easy

Exercise Group: 39-46

Learning Objective: Add two fractions

Section: 1.2

Similar To Exercise: 1.2.39

Type: Skill

12. Add:

$$\frac{1}{8} + \frac{3}{22}$$

A) $1\frac{23}{88}$

B) $\frac{23}{88}$

C) $\frac{23}{176}$

D) $2\frac{23}{176}$

E) $1\frac{23}{176}$

Ans: B

Difficulty: Easy

Exercise Group: 39-46

Learning Objective: Add two fractions

Section: 1.2

Similar To Exercise: 1.2.40

Type: Skill

13. Subtract:

$$\begin{array}{r} \frac{4}{7} \\ - \frac{1}{6} \\ \hline \end{array}$$

A) $\frac{17}{294}$

B) $\frac{17}{252}$

C) $\frac{17}{126}$

D) $\frac{17}{42}$

E) $\frac{17}{84}$

Ans: D

Difficulty: Easy

Exercise Group: 39-46

Learning Objective: subtract two fractions

Section: 1.2

Similar To Exercise: 1.2.41

Type: Skill

14. Subtract:

$$\begin{array}{r} \frac{3}{10} \\ - \frac{1}{4} \\ \hline \end{array}$$

- A) $\frac{1}{20}$
- B) $\frac{1}{50}$
- C) $\frac{1}{60}$
- D) $\frac{1}{40}$
- E) $\frac{1}{8}$

Ans: A

Difficulty: Easy

Exercise Group: 39-46

Learning Objective: subtract two fractions

Section: 1.2

Similar To Exercise: 1.2.42

Type: Skill

15. Subtract:

$$\begin{array}{r} 12\frac{11}{17} \\ - 9\frac{6}{17} \\ \hline \end{array}$$

A) $3\frac{5}{17}$

B) $4\frac{5}{17}$

C) $4\frac{5}{11}$

D) $3\frac{5}{11}$

E) $3\frac{5}{187}$

Ans: A

Difficulty: Easy

Exercise Group: 39-46

Learning Objective: subtract two numbers

Section: 1.2

Similar To Exercise: 1.2.46

Type: Skill

16. Add:

$$\begin{array}{r} 2\frac{7}{8} \\ + 2\frac{5}{6} \\ \hline \end{array}$$

- A) $6\frac{17}{144}$
- B) $6\frac{17}{24}$
- C) $6\frac{17}{32}$
- D) $5\frac{17}{144}$
- E) $5\frac{17}{24}$

Ans: E

Difficulty: Easy

Exercise Group: 39-46

Learning Objective: Add two numbers

Section: 1.2

Similar To Exercise: 1.2.45

Type: Skill

17. Find two numbers that have the product of 14 and the sum of 9.

- A) 1 and 7
- B) 1 and 6
- C) 2 and 9
- D) 2 and 6
- E) 2 and 7

Ans: E

Difficulty: Easy

Exercise Group: 52-53

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.2

Similar To Exercise: 1.2.52

Type: Skill

18. What is the rule in words? What is the output when the input is 100? Write the rule as an equation.

Input, x	2	3	4	20	100
Output, y	8	12	16	80	?

- A) The output is four times the input; $400; y = 4x$
 B) The output is six times the input; $400; y = 8x$
 C) The output is eight times the input; $400; y = 16x$
 D) The output is seven times the input; $400; y = 42x$
 E) The output is six times the input; $400; y = 80x$

Ans: A

Difficulty: Easy

Exercise Group: 1-4

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.1

Type: Concept

19. Write the phrases using the correct operation symbol $(+, -, \cdot, \div)$ and then do the operation. Write answers as fractions and decimals, where appropriate. Round decimals to the nearest thousandth. Assume the second number is subtracted from or divided into the first number.

Find the quotient of 4 and $\frac{1}{5}$.

- A) 19
 B) 21
 C) 20
 D) 22
 E) 18

Ans: C

Difficulty: Easy

Exercise Group: 9-28

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.10

Type: Application

20. Write the phrases using the correct operation symbol (+, -, ·, ÷) and then do the operation. Write answers as fractions and decimals, where appropriate. Round decimals to the nearest thousandth. Assume the second number is subtracted from or divided into the first number.
- Find the sum of $\frac{5}{4}$ and $\frac{1}{2}$.
- A) $\frac{7}{2}$, 3.500
- B) $\frac{7}{4}$, 1.750
- C) $\frac{5}{4}$, 1.25
- D) $\frac{7}{2}$, 3.5
- E) $\frac{5}{2}$, 2.5

Ans: B

Difficulty: Medium

Exercise Group: 9-28

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.11

Type: Concept

21. Write the phrases using the correct operation symbol (+, -, ·, ÷) and then do the operation. Write answers as fractions and decimals, where appropriate. Round decimals to the nearest thousandth. Assume the second number is subtracted from or divided into the first number.

Find the sum of 0.5 and $\frac{7}{2}$.

- A) 8
- B) 7
- C) 5
- D) 6
- E) 4

Ans: E

Difficulty: Easy

Exercise Group: 9-28

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.14

Type: Application

22. Write the phrases using the correct operation symbol (+, -, ·, ÷) and then do the operation. Write answers as fractions and decimals, where appropriate. Round decimals to the nearest thousandth. Assume the second number is subtracted from or divided into the first number.
- Find the difference between $7\frac{1}{4}$ and $3\frac{1}{2}$.
- A) $3\frac{1}{4}$, 3.250
 - B) $3\frac{1}{2}$, 3.500
 - C) $3\frac{1}{3}$, 3.333
 - D) $3\frac{2}{3}$, 3.667
 - E) $3\frac{3}{4}$, 3.750

Ans: E

Difficulty: Medium

Exercise Group: 9-28

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.17

Type: Application

23. Identify the constants numerical coefficients, and variables in the expression $x^2 - 8$.
- A) -8 constant; x, variable
 - B) 1, constant and numerical coefficient; 8 constant; x, variable
 - C) 1, constant and numerical coefficient; -8 constant; x, variable
 - D) 8 constant; x, variable
 - E) none of these

Ans: C

Difficulty: Easy

Exercise Group: 29-30

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.29d

Type: Application

24. Identify the constants numerical coefficients, and variables in the expression πr .
- A) r , variable
 - B) π , constant and numerical
 - C) π , constant and numerical coefficient; r , constant
 - D) π , constant and numerical coefficient; r , variable
 - E) data insufficient
- Ans: D
Difficulty: Easy
Exercise Group: 29-30
Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.
Section: 1.3
Similar To Exercise: 1.3.30a
Type: Concept

25. Write an expression in symbol for word phrase.
Let n be the input. To find a difference or quotient, write the numbers in the order in which they are stated.
The product of five and the input
- A) $\frac{5}{n}$
 - B) 5
 - C) $7n$
 - D) $5n$
 - E) $6n$
- Ans: D
Difficulty: Easy
Exercise Group: 35-38
Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.
Section: 1.3
Similar To Exercise: 1.3.35
Type: Concept

26. Change these sentence to equation. Use n as the variable.

The quotient of six and a number is ten.

A) $\frac{6}{n} = 10$

B) $\frac{n}{6} = 10$

C) $\frac{6}{n} = 6$

D) $\frac{n}{6} = 6$

E) $6n = 10$

Ans: A

Difficulty: Easy

Exercise Group: 39

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.39a

Type: Concept

27. Change these sentence to equation. Use n as the variable.

Seventeen is the difference between eleven and five tenths and a number.

A) $17 = 11.5 - n$

B) $17 = 11 - n$

C) $11.5 = 17 - n$

D) $11.5 = 11 - n$

E) $11 = 11.5 - n$

Ans: A

Difficulty: Easy

Exercise Group: 39

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.39d

Type: Application

28. Identify the operation (addition, subtraction, multiplication, division) Implies by question.

One family ate $5\frac{3}{4}$ pizzas; another family ate $2\frac{1}{5}$ pizzas. How much more did the first family eat?

- A) addition
- B) subtraction
- C) division
- D) multiplication
- E) data insufficient

Ans: B

Difficulty: Easy

Exercise Group: 49-50

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.3

Similar To Exercise: 1.3.49a

Type: Application

29. Change from equations into sentences.

$$y = 11 - \frac{x}{4}$$

- A) The output is four less the quotient of the input and four.
- B) The output is four greater the quotient of the input and eleven.
- C) The output is eleven less the quotient of the input and four.
- D) The output is four less the quotient of the input and eleven.
- E) The output is eleven greater quotient of the input and four.

Ans: C

Difficulty: Easy

Exercise Group: 16

Learning Objective: Problem-Solving Steps and Strategies

Section: 1.4

Similar To Exercise: 1.4.16a

Type: Skill

30. Write 95% as a fraction and as a decimal.

- A) $\frac{19}{2}$; 95
- B) $\frac{20}{19}$; 0.95
- C) $\frac{19}{20}$; 0.95
- D) $\frac{1}{95}$; 9.5
- E) $\frac{2}{19}$; 9.5

Ans: C

Difficulty: Easy

Exercise Group: 21-26

Learning Objective: Convert a percent into a fraction and a decimal

Section: 1.4

Similar To Exercise: 1.4.21

Type: Skill

31. Write 115% as a fraction and as a decimal.

- A) $1\frac{3}{20}$; 0.15
- B) $1\frac{3}{20}$; 1.15
- C) $\frac{20}{23}$; 0.115
- D) $\frac{23}{200}$; 11.5
- E) $1\frac{3}{20}$; 115

Ans: B

Difficulty: Easy

Exercise Group: 21-26

Learning Objective: Convert a percent into a fraction and a decimal

Section: 1.4

Similar To Exercise: 1.4.22

Type: Skill

32. Write 81% as a fraction and as a decimal.

- A) $\frac{10}{81}$; 8.1
- B) $\frac{81}{100}$; 81
- C) $\frac{1}{81}$; 8.1
- D) $\frac{81}{100}$; 0.81
- E) $\frac{81}{100}$; 8100

Ans: D

Difficulty: Easy

Exercise Group: 21-26

Learning Objective: Convert a percent into a fraction and a decimal

Section: 1.4

Similar To Exercise: 1.4.23

Type: Skill

33. A study reported by *Science News* (Nov,26,2005,p.347) found that 25% of all medication taken in space is sleeping pills. Write this percent as a fraction and as a decimal.

- A) $\frac{13}{50}$, 0.26
- B) $\frac{6}{25}$, 0.24
- C) $\frac{1}{4}$, 0.25
- D) $\frac{27}{100}$, 0.27
- E) $\frac{23}{100}$, 0.23

Ans: C

Difficulty: Medium

Exercise Group: 25

Learning Objective: Convert a percent into a fraction and a decimal

Section: 1.4

Similar To Exercise: 1.4.25

Type: Application

34. California community colleges are considered financially secure if college reserves are 6% of their total budget. Write this percent as a fraction and as a decimal.
- A) $\frac{7}{100}$, 0.07
- B) $\frac{1}{20}$, 0.05
- C) $\frac{2}{25}$, 0.08
- D) $\frac{9}{100}$, 0.09
- E) $\frac{3}{50}$, 0.06

Ans: E

Difficulty: Medium

Exercise Group: 26

Learning Objective: Convert a percent into a fraction and a decimal

Section: 1.4

Similar To Exercise: 1.4.26

Type: Application

35. Change the decimals to percents
- 0.7
- A) 7%
- B) 700%
- C) 70%
- D) 0.007%
- E) 0.9%

Ans: C

Difficulty: Easy

Exercise Group: 31-34

Exercise group: 31-34

Learning Objective: Convert a decimal into a percent

Section: 1.4

Similar To Exercise: 1.4.31a

Type: Skill

36. Change the decimals to percents

0.09

- A) 9%
- B) 9.09%
- C) 0.009%
- D) 0.1%
- E) 0.9%

Ans: A

Difficulty: Easy

Exercise Group: 31-34

Exercise group: 31-34

Learning Objective: Convert a decimal into a percent

Section: 1.4

Similar To Exercise: 1.4.34c

Type: Skill

37. Write percent statement as an expression.

70% of n

- A) $0.07n$
- B) $7000n$
- C) $700n$
- D) $7n$
- E) $0.7n$

Ans: E

Difficulty: Easy

Exercise Group: 35-36

Exercise group: 35-36

Learning Objective: Write expressions containing percents.

Section: 1.4

Similar To Exercise: 1.4.35a

Type: Skill

38. $\frac{24}{25}$
Write $\frac{24}{25}$ as a percent.
- A) 24 %
 - B) 96 %
 - C) 1.04 %
 - D) 240 %
 - E) 9.6 %
- Ans: B
Difficulty: Easy
Exercise Group: 31-34
Learning Objective: Convert a fraction into a percent
Section: 1.4
Similar To Exercise: 1.4.31
Type: Skill

39. Write 4.78 as a percent.
- A) 4.78 %
 - B) 47.8 %
 - C) 478 %
 - D) 0.0478 %
 - E) 0.478 %
- Ans: C
Difficulty: Easy
Exercise Group: 31-34
Learning Objective: Convert a decimal into a percent
Section: 1.4
Similar To Exercise: 1.4.32
Type: Skill

40. Write 4.033 as a percent.
- A) 0.4033 %
 - B) 40.33 %
 - C) 4.033 %
 - D) 0.04033 %
 - E) 403.3 %
- Ans: E
Difficulty: Easy
Exercise Group: 31-34
Learning Objective: Convert a decimal into a percent
Section: 1.4
Similar To Exercise: 1.4.33
Type: Skill

41. Change the decimal to percent.
- 0.3
- A) 30 %
 - B) 29.9 %
 - C) 30.1 %
 - D) 30.2 %
 - E) 30.3 %
- Ans: A
- Difficulty: Medium
- Exercise Group: 31-34
- Learning Objective: Convert a decimal into a percent
- Section: 1.4
- Similar To Exercise: 1.4.34
- Type: Concept

42. Write the percent statement as an expression.
- $32\frac{1}{2}\%$ of x
- A) $0.425x$
 - B) $0.315x$
 - C) $0.325x$
 - D) $0.125x$
 - E) $0.265x$
- Ans: C
- Difficulty: Easy
- Exercise Group: 35-36
- Learning Objective: Write expressions containing percents.
- Section: 1.4
- Similar To Exercise: 1.4.36
- Type: Skill

43. Write the percent statement as an expression.

$$3\frac{1}{4}\% \text{ of } x$$

- A) $0.0315x$
- B) $3.25x$
- C) $0.00325x$
- D) $0.325x$
- E) $0.0325x$

Ans: E

Difficulty: Easy

Exercise Group: 35-36

Learning Objective: Write expressions containing percents.

Section: 1.4

Similar To Exercise: 1.4.35

Type: Skill

44. Write percent statement as an expression.

$$31\frac{1}{2}\% \text{ of } n$$

- A) 1.315
- B) 0.315
- C) 3.315
- D) 4.315
- E) 2.315

Ans: B

Difficulty: Medium

Exercise Group: 35-36

Learning Objective: Convert a percent into a fraction and a decimal

Section: 1.4

Similar To Exercise: 1.4.35d

Type: Skill

45. Is x a negative number? Explain.
- A) Not necessarily; x is a variable that may represent a positive number or negative number or zero.
 - B) Yes, because there is a positive sign before x .
 - C) No, because there is no positive sign before x .
 - D) No, because there is no negative sign before x .
 - E) No, because negative means opposite and the opposite of x is y .

Ans: A

Difficulty: Medium

Exercise Group: 43-44

Learning Objective: Identify and apply vocabulary for basic operations and algebraic notation.

Section: 1.4

Similar To Exercise: 1.4.44

Type: Concept

46. Name the quadrant in which the point is located.

$(-6, -4)$

- A) I
- B) III
- C) II
- D) IV

Ans: B

Difficulty: Easy

Exercise Group: 3-4

Learning Objective: Identify the quadrant in which a point is located

Section: 1.5

Similar To Exercise: 1.5.3

Type: Concept

47. Name the quadrant in which the point is located.
 $(2, -5)$
- A) I
 - B) II
 - C) III
 - D) IV
- Ans: D
Difficulty: Easy
Exercise Group: 3-4
Learning Objective: Identify the quadrant in which a point is located
Section: 1.5
Similar To Exercise: 1.5.4a
Type: Concept
48. Name the quadrant in which the point is located.
 $(-2, 5)$
- A) I
 - B) II
 - C) IV
 - D) III
- Ans: B
Difficulty: Easy
Exercise Group: 3-4
Learning Objective: Identify the quadrant in which a point is located
Section: 1.5
Similar To Exercise: 1.5.4b
Type: Concept
49. Name the quadrant in which the point is located.
 $(-4, -4)$
- A) I
 - B) III
 - C) IV
 - D) II
- Ans: B
Difficulty: Easy
Exercise Group: 3-4
Learning Objective: Identify the axis on which a point is located
Section: 1.5
Similar To Exercise: 1.5.4c
Type: Concept

50. Name the axis on which the point is located.

$(0, 2)$

- A) Vertical
- B) Horizontal

Ans: A

Difficulty: Easy

Exercise Group: 5-6

Learning Objective: Identify the axis on which a point is located

Section: 1.5

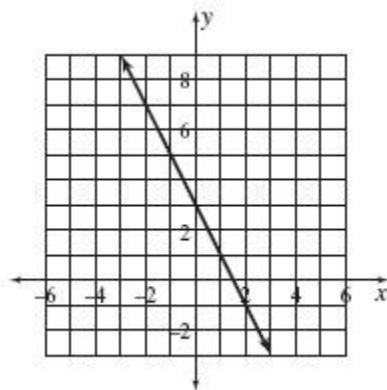
Similar To Exercise: 1.5.6

Type: Concept

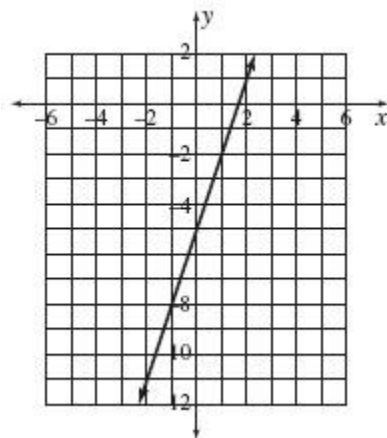
51. Draw a graph from the following input-output table.

Input x	Output y
-2	5
-1	2
0	-1
1	-4
2	-7

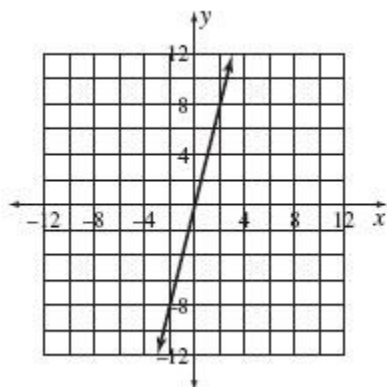
A)



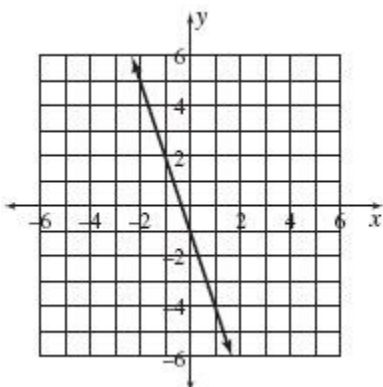
B)



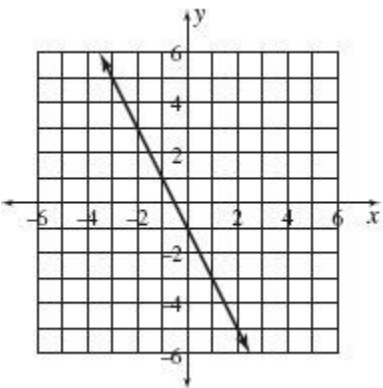
C)



D)



E)



Ans: D

Difficulty: Medium

Exercise Group: 7-10

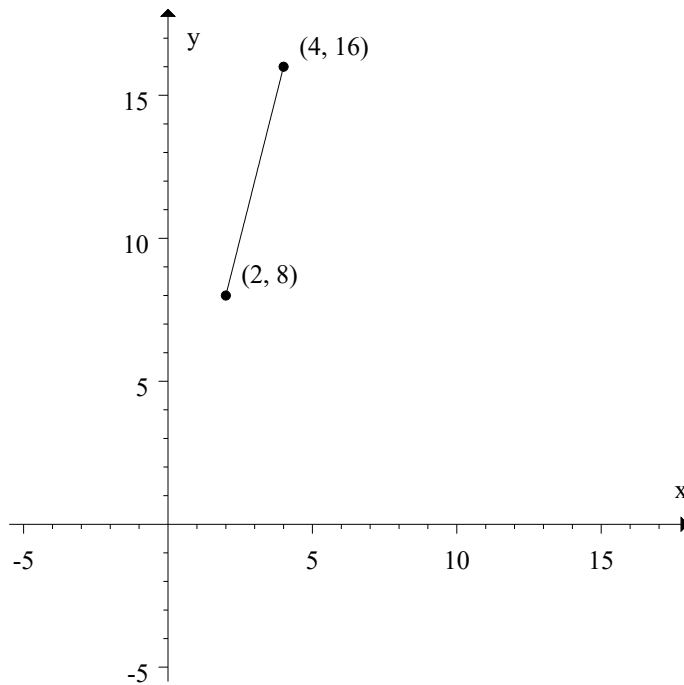
Learning Objective: draw a graph from an input-output table.

Section: 1.5

Similar To Exercise: 1.5.8

Type: Skill

52. Graph the ordered pairs $(2, 8)$ and $(4, 16)$. Draw a straight line through them. Name an ordered pair on the same line.



- A) $(3, 27)$
- B) $(12, 3)$
- C) $(3, 9)$
- D) $(1, 4)$
- E) $(5, 15)$

Ans: D

Difficulty: Easy

Exercise Group: 11-18

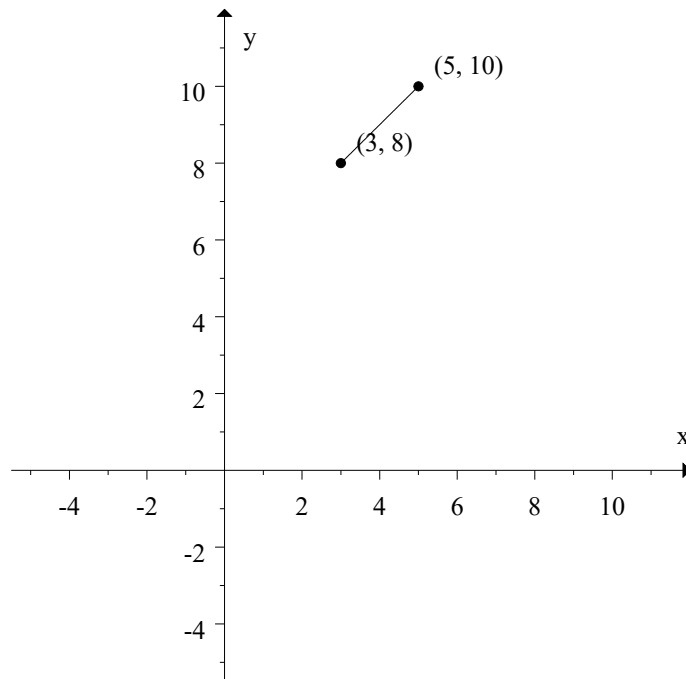
Learning Objective: Build and interpret a graph from two ordered pairs.

Section: 1.5

Similar To Exercise: 1.5.12

Type: Concept

53. Graph the ordered pairs $(3, 8)$ and $(5, 10)$. Draw a straight line through them. Name an ordered pair on the same line.



- A) $(0, 7)$
- B) $(0, 6)$
- C) $(2, 5)$
- D) $(7, 2)$
- E) $(1, 6)$

Ans: E

Difficulty: Easy

Exercise Group: 11-18

Learning Objective: Build and interpret a graph from two ordered pairs.

Section: 1.5

Similar To Exercise: 1.5.11

Type: Concept

54. Make a table for the following rule. Use integer inputs of 0 to 5.

The output is 5 more than twice the input.

A)

Input	Output
0	0
1	0.5
2	1
3	1.5
4	2
5	2.5

B)

Input	Output
0	-2
1	1
2	4
3	7
4	10
5	13

C)

Input	Output
0	8
1	7
2	6
3	5
4	4
5	3

D)

Input	Output
0	10
1	8
2	6
3	4
4	2
5	0

E)

Input	Output
0	5
1	7
2	9
3	11
4	13
5	15

Ans: E

Difficulty: Medium

Exercise Group: 19-26

Learning Objective: Build an input-output table from a rule

Section: 1.5

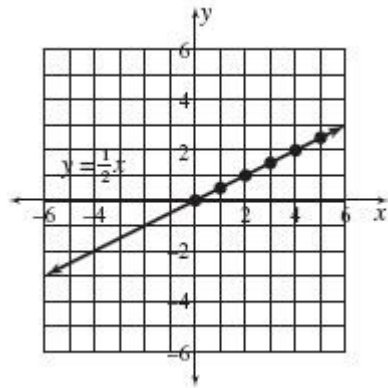
Similar To Exercise: 1.5.19

Type: Skill

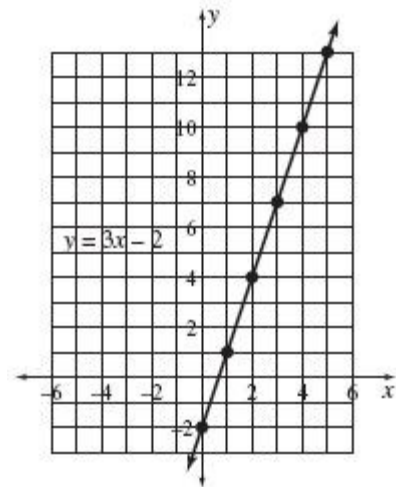
55. Make a graph for the following rule. Use integer inputs of 0 to 5.

The output is 5 more than twice the input.

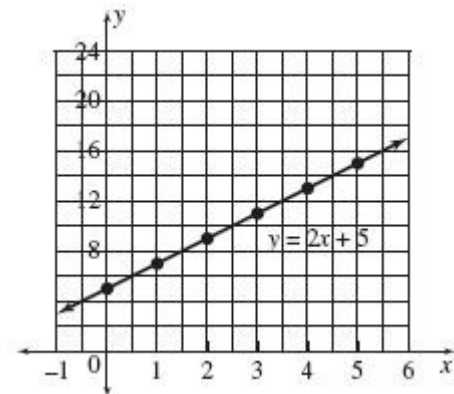
A)



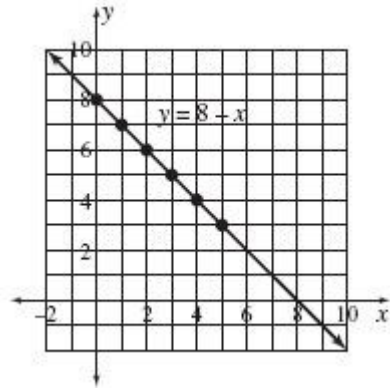
B)



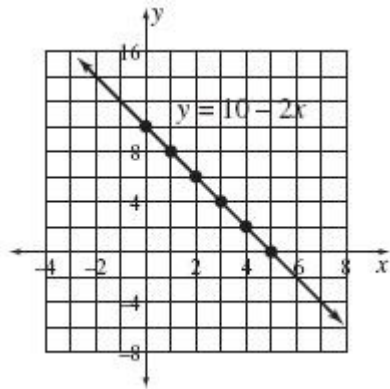
C)



D)



E)



Ans: C

Difficulty: Medium

Exercise Group: 19-26

Learning Objective: draw a graph from an input-output table.

Section: 1.5

Similar To Exercise: 1.5.26

Type: Skill

56. In the bulk foods department, candy costs \$2.29 per pound.

Use your graph to estimate the total cost of these candy purchase: $1\frac{1}{2}$ pounds, $3\frac{3}{4}$ pounds, $3\frac{1}{4}$ pounds.

- A) \$ 4.43 , \$ 9.59 , \$ 8.44
- B) \$ 2.43 , \$ 7.59 , \$ 6.44
- C) \$ 5.43 , \$ 10.59 , \$ 9.44
- D) \$ 1.43 , \$ 6.59 , \$ 5.44
- E) \$ 3.43 , \$ 8.59 , \$ 7.44

Ans: E

Difficulty: Medium

Exercise Group: 30

Learning Objective: Add or subtract rational expressions in an application setting.

Section: 1.5

Similar To Exercise: 1.5.30b

Type: Application

57. The ATT low-use plane for Internet and email costs \$15 for the first 200 MB (megabytes) plus \$0.10 for each additional MB. Use your Graph to estimate the cost of these usages: 40 MB, 195 MB, 270 MB.

- A) 16 , 16 , 23
- B) 14 , 14 , 21
- C) 15 , 15 , 22
- D) 17 , 14 , 24
- E) 13 , 16 , 20

Ans: C

Difficulty: Medium

Exercise Group: 31

Learning Objective: Add or subtract rational expressions in an application setting.

Section: 1.5

Similar To Exercise: 1.5.31b

Type: Application

58. The ATT high use plane for Internet and email cost \$40 for the first 5000 MB (megabytes) plus \$0.06 for each additional MB. (FYI, the ATT plan list 5000 MB as 5 GB.) Use your graph to estimate the cost of these usages: 4000 MB, 4900 MB, 5900 MB.

- A) 41, 41, 95
- B) 39, 39, 93
- C) 42, 39, 96
- D) 40, 40, 94
- E) 38, 41, 92

Ans: D

Difficulty: Medium

Exercise Group: 32

Learning Objective: Add or subtract rational expressions in an application setting.

Section: 1.5

Similar To Exercise: 1.5.32b

Type: Application

59. How do you find the ordered pair describing a point?

- A) For the ordered pair (x,y) , trace vertically to the vertical axis to find x , horizontally to the horizontal axis to find y .
- B) For the ordered pair (x,y) , trace vertically to the horizontal axis to find x , horizontally to the vertical axis to find y .
- C) For the ordered pair (x,y) , trace horizontally to the vertical axis to find x , vertically to the horizontal axis to find y .
- D) For the ordered pair (x,y) , trace vertically to the vertical axis to find y , horizontally to the horizontal axis to find x .
- E) For the ordered pair (x,y) , trace vertically to the horizontal axis to find y , horizontally to the vertical axis to find x .

Ans: B

Difficulty: Easy

Exercise Group: 39-44

Learning Objective: Identify quadrants, axes, the origin, ordered pairs, and coordinates.

Section: 1.5

Similar To Exercise: 1.5.40

Type: Concept

60. How do you find on which axis an ordered pair $(a, 0)$ or $(0, b)$ is located?
- A) The first number is zero on the horizontal axis, the second number is zero on the vertical axis.
 - B) The second number is zero on the horizontal axis, the first number is zero on the vertical axis.
 - C) The second number is one on the horizontal axis, the first number is zero on the vertical axis.
 - D) The second number is zero on the horizontal axis, the first number is one on the vertical axis.
 - E) The second number is one on the horizontal axis, the first number is one on the vertical axis.

Ans: B

Difficulty: Easy

Exercise Group: 39-44

Learning Objective: Identify quadrants, axes, the origin, ordered pairs, and coordinates.

Section: 1.5

Similar To Exercise: 1.5.42

Type: Concept