Exam

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) What is the difference between a subscript and an exponent? 1) _____

Answer: An exponent is a mathematical operation. A subscript is used to define a variable a specific feature or component of a variable.

2) What is the difference between a formula and a working equation? 2) _____

Answer: A formula is a basic equation, usually expressed in letters and numbers. A working equation is created when the desired variable is isolated on one side of the equation.

3) What is the purpose of estimation when problem solving? 3) _____

Answer: Estimating the expected answer in problem solving can serve as a check to make sure the answer is correct.

4) Solve for m in the formula F = ma. 4) _____

Answer: $m = \frac{F}{a}$

5) Solve for t in the formula $s = 1/2 (v_f + v_i)t$. 5) _____

Answer: $t = \frac{2s}{v_f - v_i}$

6) Solve for v_f in the formula $s = 1/2 (v_f + v_i)t$. 6) _____

Answer: $v_f = \frac{2s}{t} - v_i$

7) Solve for h in PE = mgh. 7) _____

Answer: $h = \frac{PE}{mg}$

8) Given A = 1/2 bh, if b = 10.0 cm and h = 12.2 cm, what is A? 8) _____

Answer: $A = 61.0\ cm^2$

9) A cone has a volume of 315 cm^3 and a radius of 7.50 cm. What is its height? 9) _____

Answer: h = 5.35 cm

10) A right triangle has a side of 82.4 mm and a side of 19.6 mm. Find the length of the hypotenuse. 10) _____

Answer: 84.7 mm

11) Given a cylinder with a radius of 14.4 cm and a height of 16.8 cm, find the lateral surface area. 11) _____

Answer: $A = 1520\ cm^2$

12) A rectangle has a perimeter of 80.0 cm. One side has a length of 28.0 cm. What is the length of the adjacent side? 12) _____

Answer: 12.0 cm

13) The formula for the volume of a cylinder is $V = \pi r^2 h$. If $V = 4520\ m^3$ and $h = 36.0$ m, find r. 13) _____

Answer: r = 6.32 m

14) The formula for the area of a triangle is $A = 1/2\ bh$. If $b = 3.12$ m and $A = 82.6\ m^2$, find h. 14) _____

Answer: h = 52.9 m

15) A rectangular parking lot measures 80.0 m by 75.0 m. If the parking lot needs three sections that each measure 8.00 m by 8.00 m for tree plantings, how much area is left for parking spaces? 15) _____

Answer: $A = 5810\ m^2$