

1. Translate the question into an equation. Do not solve. Let x be the unknown number.

What number is 9% of 84?

The equation is .

2. 19.36 is 8.8% of what number?

19.36 is 8.8% of .

3. Simplify.

$$(-13) + 6 \div 2$$

$$(-13) + 6 \div 2 = \text{}$$

4. Solve. First multiply to remove parentheses.

$$-4(-2 - 3z) = 13z$$

$$z = \text{}$$

5. Simplify.

$$|-98|$$

$$|-98| = \text{}$$

6. Give an example of a correct arithmetic problem involving square roots.

Choose the correct answer below.

A. $\sqrt{16} = 8$

B. $\sqrt{16} = 256$

C. $\sqrt{16} = 16$

D. $\sqrt{16} = 4$

7. Use the associative property to rewrite the following expression.

$$5 + (a + b)$$

$$5 + (a + b) = \text{}$$

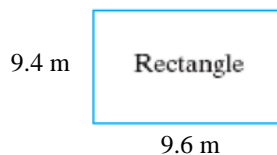
8. Identify the terms as like or unlike.

$$8r, -10r^2$$

Choose the correct answer.

- The terms are like terms.
- The terms are unlike terms.

9. Find the area of the geometric figure.



The area of the geometric figure is sq m. (Type a decimal.)

10. Simplify the expression. Use the distributive property to remove parentheses first.

$$-5(6z + 9) + 6(z - 2)$$

$$-5(6z + 9) + 6(z - 2) = \text{}$$

11. Solve.

$$-5z = 40$$

The solution is $z = \text{}$.

12. A rectangular room measures 14 feet by 8 feet. Find the cost of installing a strip of wallpaper around the room if the wallpaper costs \$0.85 per foot.

Total cost = \$

13. A space mission reached its goal when the spacecraft landed on the surface of a moon approximately 1,555,000,000 km from earth. Write 1,555,000,000 in scientific notation.

$$1,555,000,000 = \text{}$$

(Use scientific notation. Use the multiplication symbol in the math palette as needed.)

14. Write the number in standard notation.

$$3.2 \times 10^{-3}$$

$$3.2 \times 10^{-3} = \square$$

15. The temperature on a February morning is -6° Celsius at 6 a.m. If the temperature drops 4 degrees by 7 a.m., rises 9 degrees between 7 a.m. and 8 a.m., and then drops 3 degrees between 8 a.m. and 9 a.m., find the temperature at 9 a.m.

\square° Celsius

16. Simplify.

$$\frac{|6 - 15| + \sqrt{36}}{-2(6) - (-2)}$$

$$\frac{|6 - 15| + \sqrt{36}}{-2(6) - (-2)} = \square \text{ (Simplify your answer. Type an integer or a fraction.)}$$

17. Solve.

3.2 is 16% of what number?

3.2 is 16% of \square . (Type an integer or a decimal.)

18. Find the quotient.

$$\frac{-48}{-12}$$

Select the correct choice below and fill in any answer boxes in your choice.

A. $\frac{-48}{-12} = \square$

B. The answer is undefined.

19. In some card games, it is possible to have positive and negative scores. The table shows the scores for two teams playing a series of four card games. Find each team's total score after four games. If the winner is the team with the greater score, find the winning team.

	Game 1	Game 2	Game 3	Game 4
Team 1	-7	7	-7	3
Team 2	3	-6	12	-5

Team 1's total score is points.

Team 2's total score is points.

The winner is

20. Represent the given quantity as an integer.

The average depth of a certain ocean is 13,192 feet below the surface of the ocean.

The integer that describes the situation is .

21. Wyley Robinson just bought a trampoline for his children to use. The trampoline has a diameter of 6 feet. If Wyley wishes to put up netting to go around the outside of the trampoline, how many feet of netting does he need? Give the exact circumference of the trampoline and then an approximation. Use $\pi \approx 3.14$.

Find the exact circumference of the trampoline.

$$C = \text{ ft}$$

(Type an exact answer, using π as needed.)

Approximate the circumference.

$$C \approx \text{ ft}$$

(Type an integer or a decimal.)

22. Evaluate.

$$-9^2$$

$$-9^2 = \text{$$

23. Solve.

$$\frac{x}{-5} = 1 - (-3)$$

$x = \square$

(Type an integer or a simplified fraction.)

24. Solve. Check your solution.

$$15 = y - 1$$

The solution is $y = \square$.

25. Evaluate the expression when $z = -3$.

$$2 + 3z$$

$2 + 3z = \square$ when $z = -3$.

(Simplify your answer.)

26. Write using exponential notation.

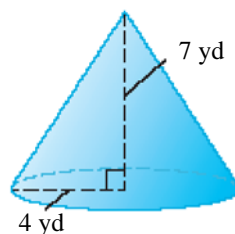
$$9 \cdot 9 \cdot 6 \cdot 6 \cdot 6$$

$9 \cdot 9 \cdot 6 \cdot 6 \cdot 6 = \square$

27. During the third quarter of last year, a company posted a net income of $-\$682$ million. If this continued, what would the company's net income have been after four quarters?

The company's net income would have been \square million dollars.

28. Find the volume of the solid. Use $\frac{22}{7}$ for π .



The volume of the solid is approximately \square cu yd. (Type an integer, a fraction, or a mixed number.)

29. Evaluate the expression when $x = -4$, $y = 7$ and $z = -5$.

$$\frac{x + 4y}{4z}$$

$$\frac{x + 4y}{4z} = \square \text{ when } x = -4, y = 7 \text{ and } z = -5.$$

(Type an integer or a simplified fraction.)

1. $x = 9\% \cdot 84$

2. 220

3. -10

4. 8

5. 98

6. D

7. $(5 + a) + b$

8. the second choice

9. 90.24

10. $-24z - 57$

11. -8

12. 37.40

13. 1.555×10^9

14. 0.0032

15. -4

16. $-\frac{3}{2}$

17. 20

18. A, 4

19. -4
4
team 2

20. $-13,192$

21. 6π
18.84

22. -81

23. -20

24. 16

25. -7

26. $9^2 \cdot 6^3$

27. -2728

28. $117\frac{1}{3}$

29. $-\frac{6}{5}$