

Study Guide 2018-2019

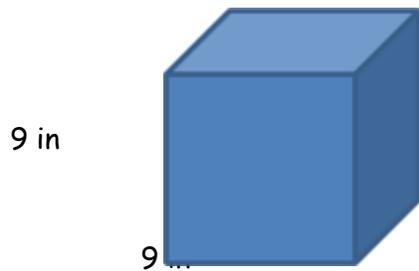
1. Write variable expression represents the phrase

Twelve less than five times a number

2. Evaluate the power

$$3^{-5}$$

3. Use the formula $V = s^3$ to find the volume of the cube with side lengths of s



4. Evaluate the expression.

$$5 + 6(4 + 5)^3$$

5. Selina's pay for two weeks was \$136.16. If she worked 4 hours the first week and 8 hours the second, what was her rate of pay?

6. Find the opposite of the integer 54.

7. Find the sum.

$$-7 + 3 + (-8)$$

8. The $\sqrt{35}$ is between what two numbers?

9. Give three examples of an irrational number.

10. Kaye runs a small business with three employees. She pays on employee \$5400 a month, another \$2800 a month and the third \$1500 a month. How much does she pay her employees in a year?

11. Simplify the expression

$$p^0$$

12. Simplify the expression.

$$7(3x - 3) - 5(x + 10)$$

13. A headboard is made up of 1728 smaller cubes. How many large cubes are there?

14. Solve the equation.

$$2p + 9 = -3$$

15. Approximately what is the $\sqrt{7}$

16. Solve the equation.

$$-12 = 6 + 9x$$

17. Solve the equation.

$$5n + 22 - 3n + 22 = -6$$

18. Solve the equation

$$5(c + 8) = -2(c + 8)$$

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19. A triangle is isosceles if it has two sides the same length. Find the value of x so that triangle ABC is isosceles.



20. The average distance from the Earth to the moon is about 297,500 kilometers. What is the number written in scientific notation?
21. A moving company charges \$60 plus \$0.35 per mile to rent a van. Another company charges \$55 plus \$0.45 per mile to rent the same van. For what number of miles will the rental cost be the same for both companies?
22. Give an example of a rational number?
23. The school marching band has 169 members. The band director wants to arrange the band members into a square formation. How many band members should be in each row?
24. A taxicab service charges \$3.75 plus \$0.40 per mile. Molly takes a taxicab from the hotel to the airport. If the total charge was \$10.59, which equation

could be used to determine the number of miles from the hotel to the airport?

25. Which expression is equivalent to the expression below?

$$m \cdot m \cdot m \cdot b \cdot a \cdot b \cdot b \cdot m \cdot b \cdot a$$

26. What is the solution to the equation below?
- $$-\frac{3}{4}p + \frac{1}{3} = \frac{7}{8}$$

27. Solve the equation below for t .

$$5t - 6 = -22 + t$$

28. The distance from the Sun to Earth is about 1.8×10^{11} meters. Suppose light travels at a speed of 9×10^8 meters per second. About how long does it take light from the Sun to reach Earth?

29. What is the value of b in the equation below?

$$5(b - 2) = 3b + 10$$

30. The table shows the populations of several states. What is the population of Georgia written in scientific notation?

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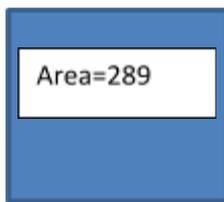
State	Population
Virginia	5,000,000
Wisconsin	5,000,000
Washington	5,000,000
California	35,000,000

31. Which is the equivalent to $\sqrt[3]{35}$?

32. Which of the expressions below is *not* equivalent to the other three?

- a) 0.015625
- b) 15.625%
- c) 4^{-3}
- d) $\frac{1}{64}$

33. The area of a square living room is 169 square feet. What is the perimeter of the room?



34. Between which two integers does $\sqrt{98}$ lie?

35. Which of the following symbols results in a true number sentence when placed in the blank?

$$\sqrt{13.96} \quad \underline{\hspace{2cm}} \quad 2\frac{4}{5}$$

36. Which of the following numbers has the least absolute value?

- a) 3.5×10^{-5}
- b) 8.75×10^{-7}
- c) 5.62×10^3
- d) 1.002×10^{12}

37. List and label the domain and range of the ordered pairs.
 (-9,-6), (5,7), (0,8), (3,-2), (1,0)

38. Explain how you can tell a relation is a function. Provide an example.

39. Do these numbers make up a right triangle?
 6, 8, 12

40. Solve.
 $2\frac{7}{8}y = 3\frac{1}{2}$

41. Using the Pythagorean Theorem what is the measure of the hypotenuse if the legs are 8 units and 23 units.

42. Which set lists the values below from least to greatest?

$$3^{-2}, \sqrt{3}, 1.3 \times 10^{-1}, \frac{1}{3}$$