



Name:

Date:

1. Nina wants to buy a scooter that costs \$100. She has \$80 already. What percent of the \$100 does Nina already have?

(A)

0.8%

(B)

8%

(C)

80%

(D)

800%

2. Which property does the equation below demonstrate?

$$7(6 + 4) = 42 + 28$$

(A)

associative

(B)

commutative

(C)

distributive

(D)

identity

3. An ocean sunfish lays about thirty million eggs at one time. If 1% hatch, approximately what number of eggs will hatch?

(A)

30,000

(B)

300,000

(C)

3,000,000

(D)

30,000,000

4. Julie has an after-school job in a local hardware store. Today she is restocking sockets for socket wrench sets. If the sockets are to be arranged in size from smallest to largest, which list is in the correct order?

(A)

$\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{9}{16}$

(B)

$\frac{1}{2}, \frac{9}{16}, \frac{5}{8}, \frac{3}{4}$

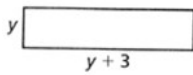
(C)

$\frac{3}{4}, \frac{5}{8}, \frac{9}{16}, \frac{1}{2}$

(D)

$\frac{9}{16}, \frac{5}{8}, \frac{3}{4}, \frac{1}{2}$

5. The width of the rectangle below is represented by a certain positive number y . Its length is represented by $y + 3$.



Which expression represents the area of the rectangle?

(A)

$$y + (y + 3)$$

(B)

$$y(y + 3)$$

(C)

$$2y + 2(y + 3)$$

(D)

$$2y + (y + 3)$$

6. Roger is on the basketball team at Ocean View Middle School. In eleven games he scored the following number of points: 8, 10, 16, 7, 13, 8, 5, 6, 7, 10, and 8. Which statement is correct about the points Roger scored?

(A)

$$\text{mean} = \text{mode}$$

(B)

$$\text{mean} < \text{mode}$$

(C)

$$\text{median} = \text{mode}$$

(D)

$$\text{median} < \text{mode}$$

7. Jane is making chocolate chip cookies for her school's bake sale. She needs one bag of chocolate chips to make 2 dozen cookies. A bag of chips costs \$2.89. Jane is planning to make 8 dozen cookies. Which expression tells Jane how much it will cost for the chips to make the cookies?

(A)

$$24 \times 8 \times \$2.89$$

(B)

$$(24 \div 8) \times \$2.89$$

(C)

$$8 \times 2 \times \$2.89$$

(D)

$$(8 \div 2) \times \$2.89$$

8. Mark has started reading a book that has 100 pages. He has read only 5 pages of the book. What percent of the book has Mark read?

(A)

5%

(B)

50%

(C)

100%

(D)

105%

9. The weather report says there is a 40% chance of rain tomorrow. What is another way to write 40%?

(A)

1 out of 40

(B)

4 out of 100

(C)

40 out of 60

(D)

40 out of 100

10. Makoto has a collection of 100 trading cards. He gives 15 cards to his best friend. Makoto then gives 10 of the cards he has left to his brother. What percent of Makoto's collection of trading cards did he give away?

Answer _____ %

What percent of his collection does he still have left?

Answer _____ %

11. Karen is solving this problem.

$$(3^2 + 4^2)^2 = ?$$

Which step is correct in the process of solving the problem?

(A)

$$(3^2 + 4^2)$$

(B)

$$(9^2 + 16^2)$$

(C)

$$(7^2)^2$$

(D)

$$(9 + 16)^2$$

12. At the Sinclair family reunion, Katy noticed that the number of people attending could be divided into three equal groups. She also noticed the number could be divided equally into groups of four, five, or six. What is the smallest number of people who could have attended the reunion?

(A)

30 people

(B)

60 people

(C)

90 people

(D)

120 people

13. Gwen has three jars of marbles that contain x marbles and two jars that contain y marbles. Which expression represents the total number of marbles Gwen has?

(A)

$$3x + 2y$$

(B)

$$2x + 3y$$

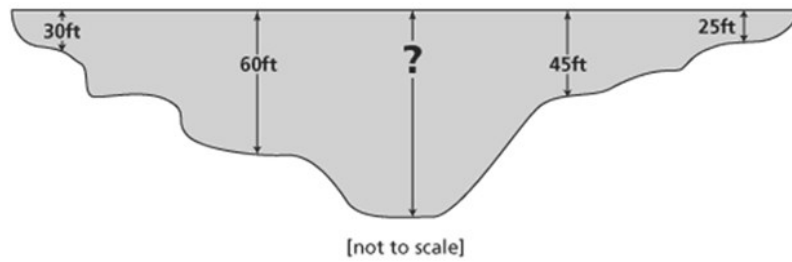
(C)

$$(2 + 3)(x + y)$$

(D)

$$3(x + y) + 2(x + y)$$

14. The diagram below shows a side profile of a lake.



The deepest part of the lake is indicated by the unknown depth on the diagram. Based on the 5 depth measurements above, the mean (average) depth of the lake is 46 feet. What is the measurement of the deepest part of the lake?

Show your work.

Answer _____ feet

15. Joey needs to travel 15 miles from Smithville to Clarksville and 5 miles from Clarksville to Elmwood. The table below shows two different taxicab companies' rates.

TAXICAB RATES	
Sunshine Cab Co.	Flat rate: \$5.00 + \$1.00 for every 5 miles
Freedom Cab Co.	Flat rate: \$2.50 + \$0.50 for every mile over 10 miles

Joey will choose one of these four options:

1. Travel with Sunshine Cab Co. to Clarksville, then with Freedom Cab Co. to Elmwood.
2. Travel with Freedom Cab Co. to Clarksville, then with Sunshine Cab Co. to Elmwood.
3. Travel nonstop with Sunshine Cab Co. the entire way.
4. Travel nonstop with Freedom Cab Co. the entire way.

Which is the *least* expensive way for Joey to make the trip?

Show your work.

16. Which mathematical expression is equivalent to the expression "nine less than six times the number t "?

(A)

$$6t - 9$$

(B)

$$6 - 9t$$

(C)

$$9 - 6t$$

(D)

$$9t - 6$$

17. What is the prime factorization of 72?

(A)

$$2^3 \cdot 3^2$$

(B)

$$2^3 + 3^2$$

(C)

$$2 \cdot 3^2 \cdot 4$$

(D)

$$2^5 + 3^3 + 13$$

18. Clara's class is going on a trip to the local science museum. Twenty-five students, one teacher, and three parents are going on the trip. The museum charges \$3.50 admission for each student and \$5.00 for each adult. How much will it cost for all the students and the adults to enter the museum?

(A)

$$\$87.50$$

(B)

$$\$101.50$$

(C)

$$\$102.50$$

(D)

$$\$107.50$$

19. As students entered a concert, a key chain was given to every second student in line. T-shirts were given to every third student in line. Which student in line was the first to receive both a key chain and a T-shirt?

(A)

5th

(B)

6th

(C)

8th

(D)

9th

20. What is the value of $2^3 + 2^4$?

(A)

14

(B)

24

(C)

28

(D)

128