

1. The expression $6^3 \times 4^2$ is equivalent to which of the following numerical expressions?

A 18×8

C 24^6

B $(6 \times 4)^5$

D 216×16

2. Evaluate:

$$6^3 + 7 \times 4$$

A 100

C 757

B 244

D 892

3. What is the value of the expression below?

$$3^4 + 9$$

A 21

C 43

B 39

D 90

4. What is the value of the expression below when $t = 6$?

$$5t - 2$$

A 20

C 30

B 28

D 32

5. Which of the following numbers is **not** a solution of the inequality below?

$$x > -5$$

A 0

C 5

B -2

D -10

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6. The set of numbers 1, 7, 11, and 36 contains values for m . What value of m makes the equation below true?

$$4m + 8 = 36$$

A 1

C 11

B 7

D 36

7. Which equation is true when $n = 4$?

A $2n = 6$

C $9 - n = 13$

B $n + 3 = 7$

D $\frac{n}{12} = 3$

8. Paul bought a package of 6 spiral notebooks for a total cost of \$13.50. Which equation represents p , the cost, in dollars, of each notebook?

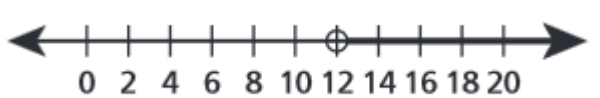
A $p = 13.50 - 6$

C $p = 13.50 + 6$

B $p = 13.50 \times 6$

D $p = 13.50 \div 6$

9. A printer makes more than 3 copies of a book every hour. Which graph represents the number of books made in 4 hours?



10. The ratio of the number of boys to the number of girls at a school is 4:5. What fraction of the students are boys?

A $\frac{4}{5}$

C $\frac{4}{9}$

B $\frac{5}{4}$

D $\frac{5}{9}$

11. Last year the girls' basketball team had 8 fifth-grade students and 7 sixth-grade students. What was the ratio of sixth-grade students to fifth-grade students on the team?

A 8 : 15

C 7 : 8

B 8 : 7

D 15 : 8

12. Julie drove 495 miles in 9 hours. What was Julie's average speed in miles per hour?

A 44

C 55

B 50

D 60

13. Kendall bought a vase that was priced at \$450. In addition, she had to pay 3% sales tax. How much did she pay for the vase?

A \$13.50

C \$453.00

B \$436.50

D \$463.50

14. What is the value of the expression below when $t = 6$?

$$5t - 2$$

A 20

C 30

B 28

D 32

15. What is the value of the expression below when $z = 7$?

$$3z - 3$$

A 12

C 21

B 18

D 34

16. In Ms. Perron's class, 75% of the students are boys. There are 18 boys in the class. What is the total number of students in Ms. Perron's class?

A 6

C 24

B 14

D 57

17. Simplify the expression below.

$$3(2x + 4y)$$

A $6x + 4y$

C $5x + 4y$

B $6x + 12y$

D $5x + 7y$

18. Sarah used the associative property to find an expression equivalent to $5 \times (a \times 7)$. Which expression did Sarah use?

A $(5 \times a) + (5 \times 7)$

C $(5 \times a) \times 7$

B $(5 + a) \times (5 + 7)$

D $5 \times (7 \times a)$

19. Which of the following is equivalent to the expression below?

$6m + 3$

A $2(3m + 3)$

C $3(2m + 3)$

B $3(2m + 1)$

D $6(m + 3)$

20. Which expression is equivalent to $16a + 24b$?

A $4(4a + 20b)$

C $4a(4 + 6b)$

B $8(2a + 3b)$

D $8ab(2 + 3)$

21. Which expression is equivalent to $3(6m) + m$?

A $19m$

C $7m + 3$

B $21m$

D $18m + 6m^2$

22. Which expression is equivalent to $5(d + 1)$?

A $5d + 5$

C $d + 5$

B $5d + 1$

D $d + 6$

23. Which expression is equivalent to $8x - 2y + x + x$?

A $4x$

C $6x - 2y$

B $8x$

D $10x - 2y$

24. Which number best represents the location of point E on the number line below?



A -1.8

C -1.5

B -1.6

D -1.3

25. Which of the following rules is true for all values in the input-output table below?

Input (x)	Output (y)
2	4
3	6
6	12
8	16
10	20

A $x + 1 = y$

C $2x = y$

B $x + 2 = y$

D $3x - 2 = y$

26. The table below shows a proportional relationship of 2:3.

4	6
8	12
10	a

What number should replace a in the table?

A 11

C 15

B 14

D 18

27. The table below shows how much money a grocery store receives for selling different amounts of asparagus.

ASPARAGUS SALES

Number of Pounds	Total Sales
4	\$10
6	\$15
8	\$20
10	?
12	?

If the unit rate is constant, what are the total sales for 12 pounds of asparagus?

A \$22.50

C \$30.00

B \$25.00

D \$32.50