1. Evaluate: \((4 ÷ 2)^4 - 4^2 ÷ 2^2\)
   a. 12  b. 8  c. 0  d. -3

2. Simplify: \(3 - (x - y) + (x - y)\)
   a. 0  b. \(3 - 2x - 2y\)  c. 3  d. \(3 + 2x + 2y\)

3. Solve: \(2x + 6 = 3x + 9\)
   a. 0  b. 1  c. -3  d. 3

4. Solve: \(- (x + 2) < -2 (-2x + 5)\)
   a. \(x > \frac{12}{5}\)  b. \(x < -4\)
   c. \(x > \frac{8}{5}\)  d. \(x < -\frac{12}{5}\)

5. Evaluate: \(-2x^2 - 6x + 8\), when \(x = -2\)
   a. -6  b. 28  c. 6  d. 12

6. Express eight less than twice a number as an algebraic expression.
   a. \(8 - 2x\)  b. \(2x - 8\)
   c. \(2(8 - x)\)  d. \(2(x - 8)\)
7. If 10 cups of flour are needed to make 3 loaves of bread, how many cups of flour are needed to make 17 loaves?

a. \(56\frac{2}{3}\)  

b. \(5\frac{1}{10}\)

c. 27  
d. \(41\frac{5}{3}\)

8. Simplify: \(\sqrt[4]{x^4 y^5 z^6}\)

a. \(x^2 y^2 z^3\)  
b. \(x^2 y^3 \sqrt{y}\)

c. \(xyz \sqrt{xy^4 z^5}\)  
d. \(x^2 \sqrt{y^5 z^6}\)

9. Perform the indicated operation: \((x - 5)(x^2 + 5x + 25)\)

a. \(x^3 - 125\)  
b. \(x^3 + 50x^2 - 125\)

c. \(x^2 - 10x + 25\)  
d. \(x^3 - 10x^2 - 50x - 125\)

10. Perform the indicated operation: \((5x - 2y + 9) - (2x - 5y + 1)\)

a. \(7x - 7y + 10\)  
b. \(3x - 7y + 8\)

c. \(3x - 7y + 10\)  
d. \(3x + 3y + 8\)

11. Simplify: \(\frac{3}{4x^2 - 1} + \frac{4x}{2x + 1}\)

a. \(\frac{8x^2 - 4x + 3}{4x^2 - 1}\)  
b. \(\frac{6x - 3}{4x^2 + 2x}\)

c. \(3 + 4x\)  
d. \(\frac{3 + 4x}{4x^2 - 1}\)
12. Simplify: \( \frac{x^2 - x^3}{x^4} \div \frac{1-x}{x} \)

a. \( \frac{1}{x} \)  
   b. \( \frac{x^3 - x^4}{x^4 - x^5} \)  
   c. \( \frac{x^4 - x^3}{x^4 - x^5} \)  
   d. \( \frac{x^3}{x^5} \)

13. How much interest will Tom pay if he borrows $600 for 2 years at 9% simple interest?  (Use: \( I = prt \))

   a. $10,800  
   b. $801  
   c. $108  
   d. $81

14. A butcher combined ground beef that cost $3.50 per pound with ground beef that cost $4.10 per pound. How many pounds of each were used to make 80 pounds of a mixture that sells for $3.65 per pound?

   a. 20 lbs @ $3.50  
      60 lbs @ $4.10  
   b. 30 lbs @ $3.50  
      50 lbs @ $4.10  
   c. 50 lbs @ $3.50  
      30 lbs @ $4.10  
   d. 60 lbs @ $3.50  
      20 lbs @ $4.10

15. Paola can roller skate 2 miles per hour faster than she can skateboard. She roller skates for 6 miles and then skateboards for 2 miles. If the total time of her outing is \( 2 \frac{1}{2} \) hours, find the rate at which she roller skates and skateboards.

   a. roller skates 6 mph, skateboards 4 mph  
   b. roller skates 3 mph, skateboards 1 mph  
   c. roller skates 4 mph, skateboards 2 mph  
   d. roller skates 6 mph, skateboards 3 mph
16. Factor completely: $5x^2 + 5x - 360$
   a. $(5x - 9)(x + 40)$
   b. $5(x - 8)(x + 9)$
   c. $5(x + 8)(x - 9)$
   d. $5(x - 8)(x - 9)$

17. Simplify: $\frac{8z^{-4}}{32z^{-2}}$
   a. $\frac{4}{z^2}$
   b. $\frac{1}{4z^2}$
   c. $4z^2$
   d. $\frac{x^6}{4}$

18. Factor completely: $2x^2 - 32$
   a. $(2x - 4)(x - 8)$
   b. $2(x - 2)(x + 8)$
   c. $2(x - 4)(x + 4)$
   d. $(2x - 8)(x + 4)$

19. Simplify: $\frac{1}{4^{-2}}$
   a. -16
   b. $-\frac{1}{4}$
   c. 16
   d. $-\frac{1}{8}$

20. Insert one of the following to make a true statement. $|3 - 5| \ ? \frac{22}{11}$
   a. <
   b. >
   c. =
   d. ≠

21. Write in slope-intercept form, an equation of the line with a slope of -12 passing through the point (-3,0).
   a. $y = -12x$
   b. $y = -3x - 12$
   c. $y = -12x - 36$
   d. $y = -12x + 3$
22. What equation is shown in the graph?
   a. \( y = 3x - 2 \)
   b. \( y = 3x + 2 \)
   c. \( y = \frac{1}{3}x + 2 \)
   d. \( y = -\frac{1}{3}x - 2 \)

23. The \textit{x-value} of the solution for this system of equations is:
   \[
   
y = 2x - 4 \\
y = -2x + 8
   \]
   a. \( x = 2 \)
   b. \( x = 3 \)
   c. \( x = 1 \)
   d. \( x = 4 \)

24. Which order pair is a solution of the system of equations?
   \[
   
x + 2y = -6 \\
3x + 2y = -12
   \]
   a. \((0, -6)\)
   b. \((2, -4)\)
   c. \((4, -5)\)
   d. \((-3, -\frac{3}{2})\)

25. Multiply: \(3(\sqrt{5} - \sqrt{x})\)
   a. \(3\sqrt{5} - 3\sqrt{x}\)
   b. \(\sqrt{15} - \sqrt{3x}\)
   c. \(15 - 3x\)
   d. \(\sqrt{15} - 3x\)
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