

1. Evaluate  $5 - 7 + 2(-3)$   
A)  $-4$                       B)  $-7$                       C)  $-8$                       D)  $4$                       E)  $0$
2. Evaluate  $-3 - [-2 - (-7)]$   
A)  $-8$                       B)  $-12$                       C)  $2$                       D)  $6$                       E)  $15$
3. If  $x$  represents a number, "the sum of three times a number and 2" can be expressed as:  
A)  $3x - 2$                       B)  $3(x + 2)$                       C)  $3x + 3(2)$                       D)  $x + 6$                       E)  $3x + 2$
4. Simplify.  $-8t - (-6t)$   
A)  $-14t$                       B)  $-2t$                       C)  $14t$                       D)  $48t^2$                       E)  $-48t$
5. Simplify  $-3(2x - 1) + 5$   
A)  $-6x + 9$                       B)  $-6x + 12$                       C)  $6x + 8$                       D)  $-6x + 8$                       E)  $-6x + 4$
6. Evaluate the expression  $x^2 - 2xy + y^2$  when  $x = -3$  and  $y = 2$ .  
A)  $-29$                       B)  $7$                       C)  $25$                       D)  $73$                       E)  $1$
7. When  $p = \frac{5}{6}$ , The expression  $-12p + 3 =$   
A)  $7$                       B)  $-13$                       C)  $-16$                       D)  $-30$                       E)  $-7$
8. Simplify:  $2x - 4(y - x) - 3y$   
A)  $6x + 7y$                       B)  $x - 7y$                       C)  $-7y - 2x$                       D)  $6x - 7y$                       E)  $3x - y$
9. If  $x + \frac{1}{3} = -\frac{5}{6}$ , then  $x =$   
A)  $-\frac{1}{2}$                       B)  $-\frac{2}{3}$                       C)  $-\frac{5}{6}$                       D)  $-\frac{7}{6}$                       E)  $\frac{1}{2}$
10. If  $-2(x - 5) + 3x = 4 - 9$ , then  $x =$   
A)  $-15$                       B)  $-3$                       C)  $3$                       D)  $5$                       E)  $-5$
11. If  $a = -2$ ,  $b = -1$ , and  $c = -4$ , what is the value of  $b^2 - 4ac$ ?  
A)  $-40$                       B)  $-33$                       C)  $-31$                       D)  $5$                       E)  $33$

12. Solve for  $x$ :  $5x - (x + 4) = -8$ .
- A)  $x = -1$       B)  $x = -8$       C)  $x = 0$       D)  $x = 4$       E)  $x = -3$
13. A coat is on a special sale at a 20% discount. If the sale price of the coat is \$96, what is the price of the coat before the discount?
- A) \$102      B) \$115.20      C) \$120      D) \$140      E) \$116
14. A 29 foot pipe has been cut into three parts. If the longest part is 3 times the shortest part, and the middle-sized part is 4 feet longer than the shortest part, how long is the longest part?
- A) 9 ft      B) 12 ft      C) 15 ft      D) 18 ft      E) 20 ft
15. Which is the coordinates of the point which starts at the origin, move 5 unites to the left then move 3 units up?
- A)  $(-3, 5)$       B)  $(5, -3)$       C)  $(-5, -3)$       D)  $(3, -5)$       E)  $(-5, 3)$
16. Which of the following formulas can be derived from  $E = IR$ ?
- A)  $R = E - I$       B)  $R = \frac{I}{E}$       C)  $R = \frac{E}{I}$       D)  $R = EI$       E)  $R = I - E$
17. Which of the following formulas can be derived from  $V = \frac{1}{3}bh$ ?
- A)  $h = \frac{V}{3b}$       B)  $h = \frac{3V}{b}$       C)  $h = \frac{bV}{3}$       D)  $h = \frac{3b}{V}$       E)  $h = \frac{1}{3}Vb$
18. Given that  $y = mx + b$ , then  $x =$
- A)  $y - b - m$       B)  $\frac{y}{m} - b$       C)  $\frac{y - b}{m}$       D)  $\frac{y}{m + b}$       E)  $y - \frac{b}{m}$
19. Monday morning the store opened with 960 copies of the new Harry Potter book in its inventory. On Monday, they sold  $\frac{3}{8}$  of the books. On Tuesday, they sold  $\frac{4}{5}$  of the remaining books. How many Harry Potter books did the store have Wednesday morning?
- A) 24      B) 120      C) 180      D) 288      E) 672
20. A number that is ten less than the sum of  $-8$  and twice the opposite of the number. What is the number?
- A) 4      B)  $-2$       C)  $\frac{2}{3}$       D) 18      E)  $-6$