1-1 Solving Linear Equations

Name: _____ Time› Start: _____ Finish: _____ Total Time = _____

Solve and check each equation.

1. $3(x + 2) - 5x + 2 = 4(x + 2) + 24$

2. $5(x - 2) - (3x - 7) = 6(-2x + 4)$

3. $-2(3x - 1) + 8x + 5 = {}^{-}3x + 17$

4. $5(4x - 2) + 2(3x + 5) = 20x - 7$

Simplify:

5. $a^2 \bullet a^4 =$ _____

6. $(a^3)^3 =$ _____

7. $(2a^2b^3)^2 =$ _____

8. $a^5 \bullet a^4 =$ _____

9. $a^3 \bullet a^3 =$ _____

10. $(3ab^2)(3ab) =$ _____

11. $(-2a)(4a) =$ _____

12. $a^3 \bullet b^3 \bullet a^4 \bullet b^5 =$ _____

13. $(ab^3)(4a^2b^2) =$ _____

14. $(3x^5)(4x^7) =$ _____

15. $2x \bullet 3x \bullet 2x^2 \bullet 3x =$ _____

16. $(2abc)(-3abc) =$ _____

17. $(-4a^4b^{10})(-2a^4b^3) =$ _____

18. $(2a^4b^3c^2)^3 =$ _____

19. $(-3a^3b^5)^2 =$ _____

20. $2ab \bullet -2ab =$ _____

SAT Questions

_____ 21. If $2x + 4x + 6x = -12$, what is x?

_____ 22. If $3x = 12$, then $5x = ?$

_____ 23. If $5c + 3 = 3c + 5$, what is the value of c?

_____ 24. If $x = \frac{2}{3}(x + y)$, which of the following is an expression for x in terms of y?

A. $\frac{2}{3}y$ B. y C. $\frac{3}{2}y$ D. 2y E. 3y

_____ 25. If $2x - 1 = 9$, what is $10x - 5$?

_____ 26. If $2(x + 1) = 14$, what is $3x$?

_____ 27. Let the lengths of the sides of a triangle be represented by $x + 3$, $2x - 3$, and $3x - 5$. If the perimeter of the triangle is 25, what is the length of the shortest side?

_____ 28. In the figure below, if x is 150 more than y, what is the value of y?