

7th Grade Review for Algebra Test

Name: _____

Date: _____

Complete the following questions:

PART 1: Combine like terms.

1. $3a - 5y + 7a - 4y$
2. $4ab - 6ba - 2ab + 9ab$
3. $-3x^2 - 4x + 6x^2 - 2x^3$
4. $9b^3 - 2b - 6b^2 - 10b^3$

PART 2: Simplify the following terms

5. $-a \times a + a + a \times a \times a$
6. $w \times w \times w + w + w \times w$
7. $3x^2y \times \frac{5}{3}x^4y^2$
8. $\frac{4}{5}a^2b^4 \times 25a^3b$
9. $\frac{3}{4}c^4a \times 2\frac{2}{3}ca^2$
10. $\frac{3x^2y^5}{9x^2y^2}$
11. $-3(x - 2)$
12. $2x(3x - 1)$
13. $\frac{2}{3}x(9x^4 - 18x - 6)$
14. $\frac{4}{5}(-15x - 25) + 5$
15. $-(y + 1) + 2(3y + 7)$
16. $\frac{2}{3}(x - 4) - (3x + 5)$
17. $2 - 4(2b + 5)$ *Hint: do not subtract 4 from 2 first. Distribute (-4) first.*
18. $\frac{1}{2} - 5(w + 3)$

PART 3: solve for the variable.

19. $x - 3 = 20$
20. $-5 - r = -13$
21. $-34 + 2y = 12$
22. $-23 = -3 - y$
23. $-2(x + 5) = -4$
24. $4 - 3(2y - 3) = -2$
25. $\frac{4(2n-5)}{3} = 20$
26. $\frac{1}{2}(x - 3) + \frac{1}{2}(5x - 4) = -1$
27. $\frac{3}{2}(-3x - 5) + \frac{4}{5}(3x + 1) = -10$

PART 4: Write the following sentences as an equation then solve for the variable.

28. I think of a number double it then add 5. If the result is 23, what is the number?
29. A quarter of a number is 13. Find the number.
30. When a number is halved and one is added, the result is 7. What is the number?

