

Simplifying Expressions

1. $(8x^2 - 7x + 1) + 2(3x^2 + 2x - 12)$	2. $(7a^2 + 4ab - b^2) - 2(3a^2 - 7ab + 5b^2)$
3. $3a^2 - 2ab + b^2 - 4a + 9b + a^2 + 7ab - b^2 + 6a$	4. $5a^3 + 4a^2 + 3b^2 - a + 9b + a^2 + 2b + 6b^2 + 10a$

Solving Equations. Do NOT round answers. Solve for the variable in each problem. Give answers in the form of integers, exact decimals, or reduced fractions.

5. $\frac{3x+11}{5} = \frac{x-8}{4}$	6. $\frac{x+6}{2} = \frac{7x-3}{9}$
7. $\frac{w}{12} = \frac{7}{15}$	8. $\frac{y}{-5} = -3$
9. $-\frac{4}{7}x = 20$	10. $\frac{5}{3}x = -75$

$$11. \frac{3}{4}(12-8x)=18$$

$$12. 7b-18=3b+22$$

$$13. 3(x-1)=-2(x-5)$$

$$14. y+8=10-y$$

$$15. 6a+14=6a+12$$

$$16. 9w=5w+4$$

$$17. 13-x=13+5x$$

$$18. 11x=8+11x$$

$$19. 2a+9=2a+9$$

$$20. 12(3y-4)=6(6y-8)$$

21. $-4w + 8 = 6w - 2$

22. $-7(2x - 1) = 7 - 5x$

23. $2(3x + 7) = 3(2x + 4)$

24. $(15x + 7) = 3(5x - 1)$

25. $3.2(2x - 6.4) + 10.1 = 24$

26. $12x - 3.5(2 + 14x) = 28$

27. $7.4x + 12.5 = 22.7 + 2.3x$

28. $-50.4 = -8.4x$

29. $27.2 = 6m - 36.4$

30. $\frac{3}{4}\left(24a - \frac{8}{15}\right) = 9$