

#1-5, Simplify each, round answers to the 100ths.

1. $(-4)^2(-3)$

$16 \cdot -3$
 -48

2. $(4+3) - 5 \cdot 6$

$7 - 30$
 -23

3. $2 + 6(8-3)^3$

$2 + 6(5)^3$
 $2 + 6(125)$
 752

4. $[8 + (2-6)^2] \div 4$

$(8 + (-4)^2) \div 4$
 $[8 + 16] \div 4$
 $24 \div 4$
 6

5. $\frac{6-9}{3+1}$

$\frac{-3}{4}$

#6-8, Evaluate each expression for the given value (s).

6. $3(x+4) - 1$, for $x = -2$

$3(-2+4) - 1$
 5

7. $x(y-x) + z$, when $x = -2$, $y = -1$ and $z = 0$.

$-2(-1 - (-2)) + 0 = -2(-1+2) + 0 = -2$

8. $|x+3| + 7$, for $x = -20$

$|-20+3| + 7$
 $|-17| + 7 = 24$

#9-12, Simplify each expression.

9. $16x - 20x$

$-4x$

10. $-2(3w + 4) - w + 7$

$-6w - 8 - w + 7$
 $-7w - 1$

11. $-2y + 3y^2 - 3y + y$

$-5y + y$
 $-4y + 3y^2$

12. $4a - 3(3 - 5a)$

$4a - 9 + 15a$
 $19a - 9$

#13-21, Solve each equation. Round your answers to the 100ths.

13. $x - 32 = -14$

$+32 +32$

$x = 18$

14. $5.6 - y = 3.3$

$-5.6 -5.6$

$-y = -2.3$

$y = 2.3$

15. $3m - 11 = 1$

$3m = 12$

$m = 4$

16. $4(x - 7) = (2+3)^2$

$4x - 28 = 25$

$4x = 53$

$x = 13.25$

17. $4x - 3 = 5 + 2x$

$2x = 8$

$x = 4$

18. $2(2w - 3) = 6(w + 2)$

$4w - 6 = 6w + 12$

$-18 = 2w$

$w = -9$

19. $\frac{x-1}{3} = -17$

$x - 1 = -51$

$x = -50$

20. $\frac{12}{5} = \frac{2}{x}$

$12x = 10$

$x = 1.2$

21. $\frac{x-1}{3} = \frac{x}{5}$

$5x - 5 = 3x$

$2x = 5$
 $x = 2.5$

22. Check you answer for #17 by plugging it back into equation. How can you tell if your solution is the correct one?

$4(4) - 3 = 5 + 2(4)$
 $16 - 3 = 5 + 8$
 $13 = 13$

23. How can you tell if an equation has infinite solutions?

no variable left when solving a true statement

#24-25 Solve each equation for the indicated variable.

24. $3x + 2y = 10$; solve for y

$-3x -3x$
 $\frac{2y}{2} = \frac{10-3x}{2}$

$y = \frac{10-3x}{2}$ or $y = 5 - \frac{3}{2}x$

25. $4a + 5b - 6c = 7d$; solve for b

$-4a -4a$
 $5b - 6c = 7d - 4a + 6c$
 $+6c$

$b = \frac{7d - 4a + 6c}{5}$

#26-28 Solve each inequality and graph your solution set.

26. $3 + x > 10$

$-3 -3$

$x > 7$



27. $-3 \leq 2x + 5 \leq 9$

$-5 -5 -5$
 $-8 \leq 2x \leq 4$

$-4 \leq x \leq 2$



28. $x+1 > 5$ or $2x+3 \leq 1$

$x > 4$ or $\frac{2x-2}{2}$

$x > 4$ or $x \leq -1$

