

8th Grade Math Prep

Multi-step equations

Name _____

Solve each equation.

1. $8x + 7 = 31$

2. $-9x + 1 = -80$

3. $2n + 10 = -2$

4. $\frac{n}{5} + 4 = 0$

5. $\frac{x+9}{3} = 8$

6. $63 + 7k = 84$

7. $4x + 6 + 3 = 17$

8. $6w + 5w = -11$

9. $-6n - 2n = 16$

10. $8m + 13m = 63$

11. $-4x + 16 = 12$

12. $-2 + 5x + 30 = -37$

13. $10 + 30n = -80$

14. $x + 11 + 8x = 29$

15. $-5x - 2x = 84$

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Order of operations with integers

Simplify using order of operations and the rules for signed numbers.

1. $6^2 + (-14) \div 2 - (-8)$

2. $(-12)^2 \div 4 - 3 \cdot 2^4$

3. $4(6 - 9) \div 6 + (-15)$

4. $[5 \cdot 3 - (-3)^3] + (-8)$

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

6. $4 \cdot 5 - 10 + (-2)(1 - 2) + 5$

7. $8 - 3 \cdot 2 - 33 \div 11$

8. $7 - 3(4 - 5) - 21$

9. $9 \div 3 + 7 \cdot 4 \div (-2)$

10. $12 \div (-6) + 5^2 \cdot 3$

11. $-6 \times 8 - (4^2 + 2) + 72 \div (-8)$

12. $5 \cdot 2^2 - 2^3(-6 + 3)$

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Fractions

Add, subtract, multiply, or divide the following. Be sure your answer is in simplest form. *Show ALL of your work!!*

1.
$$\begin{array}{r} 4\frac{3}{4} \\ + 2\frac{1}{8} \\ \hline \end{array}$$

2.
$$\begin{array}{r} 8\frac{1}{6} \\ + 6\frac{1}{8} \\ \hline \end{array}$$

3.
$$\begin{array}{r} 9\frac{3}{5} \\ + 2\frac{1}{2} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 3\frac{2}{3} \\ + 9\frac{1}{4} \\ \hline \end{array}$$

5.
$$\begin{array}{r} 7\frac{2}{3} \\ - 1\frac{2}{9} \\ \hline \end{array}$$

6.
$$\begin{array}{r} 3\frac{1}{8} \\ - 1\frac{3}{4} \\ \hline \end{array}$$

7.
$$\begin{array}{r} 4\frac{1}{6} \\ - 1\frac{1}{15} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 13\frac{1}{7} \\ - 3\frac{1}{2} \\ \hline \end{array}$$

9. $5\frac{1}{3} \times 3\frac{1}{2}$

10. $2\frac{2}{7} \times 5\frac{3}{5}$

11. $4\frac{2}{5} \times 1\frac{3}{7}$

12. $7\frac{1}{2} \times 1\frac{5}{6}$

13. $2\frac{2}{3} \div 6\frac{1}{2}$

14. $9\frac{3}{7} \div 4\frac{1}{2}$

15. $5\frac{1}{10} \div 4\frac{1}{2}$

16. $3\frac{3}{4} \div 1\frac{1}{4}$