

Prerequisite Skills for Integrated Algebra and Geometry

Computation:

- Apply integer rules to make calculations (without a calculator)
 - [Khan Academy Video: Adding and Subtracting Integers](#)
 - [Khan Academy Video: Multiplying and Dividing Integers](#)
- Use order of operations to simplify expressions
 - [Khan Academy Video: Order of Operations](#)
- Apply the Distributive Property to simplify expressions
 - [Khan Academy Article: The Distributive Property Explained](#)
- Operations on fractions (basic)
 - [Khan Academy Video: Adding Fractions with Unlike Denominators](#)
 - [Khan Academy Video: Subtracting Fractions with Unlike Denominators](#)
 - [Khan Academy Video: Multiplying Fractions](#)
 - [Khan Academy Video: Dividing Fractions](#)

Solving Equations and Inequalities:

- Solve two-step equations using inverse operations
 - [Khan Academy Review: Two-Step Equations](#)
- Graph inequalities in one variable on a number line
 - [Khan Academy Video: Plotting Inequalities](#)

Graphing:

- Graph ordered pairs on the coordinate plane
 - [Khan Academy Video: Plotting a Point](#)

PRACTICE PROBLEMS

Find the sum, difference, product, or quotient.

1. $5 - 12$

2. $-8 - 7$

3. $-11 + 20$

4. $7 - (-7)$

5. $-4 \cdot -8$

6. $9 \cdot -3$

7. $-12 \div 2$

8. $-30 \div -5$

Use order of operations to simplify each expression.

9. $20 - 10 + 10$

10. $2(5 + 4) \div 6$

11. $4^2 \div 2 + 2$

12. $8 \div 4 \cdot 2 + (9 - 6)^2$

Apply the Distributive Property to simplify each expression.

13. $3(10 + 7)$

14. $5(20 - 3)$

15. $8(x - 7)$

16. $11(x + 2)$

Find the sum, difference, product, or quotient.

17. $\frac{5}{6} + \frac{2}{3}$

18. $\frac{1}{4} + \frac{1}{3}$

19. $\frac{1}{3} - \frac{1}{10}$

20. $\frac{2}{3} - \frac{1}{9}$

21. $\frac{1}{5} \cdot \frac{2}{7}$

22. $\frac{3}{8} \cdot \frac{4}{9}$

23. $\frac{7}{9} \div \frac{3}{2}$

24. $\frac{5}{6} \div \frac{10}{3}$

Solve each of the following two-step equations. Check each solution.

25. $3x - 10 = 11$

26. $-4x + 9 = 13$

27. $\frac{x}{2} + 3 = 18$

28. $\frac{x}{6} - 6 = 0$

Graph each of the following inequalities on a number line.

29. $x > 5$



30. $x < 3$



31. $x \geq -4$



32. $x \leq 150$



33. Graph the following ordered pairs on the coordinate plane. Label each point.

A: $(3, -2)$ B: $(-10, 10)$ C: $(4, 0)$ D: $(7, 7)$ E: $(-6, 5)$ F: $(0, -8)$ G: $(1, 9)$ H: $(\frac{3}{2}, -5)$

