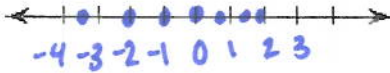


# Key

## Chapter 1 Review

1. Write the numbers in *increasing* order.  $\frac{5}{3}, -2, 0, -\frac{7}{2}, \frac{3}{5}, \frac{4}{3}, -1$   
Then graph them on a number line.



$$-\frac{7}{2}, -2, -1, 0, \frac{3}{5}, \frac{4}{3}, \frac{5}{3}$$

2. State the property that is illustrated.  $3 \cdot (5 \cdot 7) = (3 \cdot 5) \cdot 7$  Assoc. Prop. of Mult.

3. State the property that is illustrated.  $14 \left( \frac{1}{14} \right) = 1$  Inverse Prop. of Mult.

4. Evaluate  $2a^3 + (2a)^3$  when  $a = -3$ .  $-270$

Simplify the expression.

5.  $9(a - 1) + 4(a - 1) = 9a - 9 + 4a - 4 = 13a - 13$

6.  $3f + 9 - 4f + 5 = -f + 14$

7. You and five friends go to a movie. The tickets cost \$6.75 each. You each buy a drink for \$2.25 and a box of popcorn for \$4.00. Write an expression that represents the total amount of money spent. Then evaluate the expression.

$$\begin{aligned} \text{Total} &= 6(6.75) + 6(2.25) + 6(4.00) \\ &= \$78 \end{aligned}$$

8. Solve the equation.  $-x + 3 = 7x + 8$   
 $-5 = 8x$   $x = -\frac{5}{8}$

9. Solve the equation.  $5(3 - 4x) = 7 - (4 - x)$   
 $15 - 20x = 7 - 4 + x$   $x = \frac{12}{21}$   
 $12 = 21x$

Solve the equation.

10.  $\frac{1}{2}(y + 1) = 9$   $y + 1 = 18$   $y = 17$

11. Solve for  $t$  in the equation  $-9 = t + 4s$ .

$$t = -9 - 4s$$

12. Solve for  $p$ :  $-6p - q = p + 5q$

$$-6q = 7p$$

$$p = \frac{-6q}{7}$$

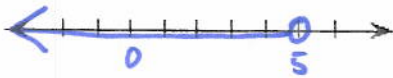
13. You are selling pizza for a fund raiser. Slices of plain pizza sell for \$1 a slice. Pepperoni pizza sells for \$2 a slice. At the end of the evening, you find that you have collected a total of \$30. You sold 10 slices of plain pizza. How many slices of pepperoni pizza did you sell?

$$30 = 10(1) + 2x$$

$$20 = 2x$$

$$10 = x$$

14. Solve the inequality. Then graph your solution.  $6x - 5 < 25$



$$6x < 30$$

$$x < 5$$

Solve the compound inequality.

15.  $-5 < -2h - 15 < 7$

$$10 < -2h < 22$$

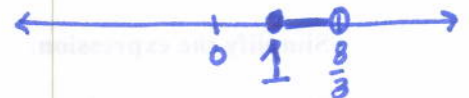
$$-5 > h > -11$$

Solve the inequality. Then graph the solution.

\* Flip sign!

16.  $3x < 8$  or  $4x \geq 4$

$$x < \frac{8}{3} \text{ or } x \geq 1$$



Solve the absolute value equation.

17.  $|x + 6| = 6$

$$x + 6 = 6 \text{ or } x + 6 = -6$$

$$x = 12 \text{ or } x = -12$$

18. Solve the inequality. Then graph your solution.  $|2x - 3| \leq 5$



$$2x - 3 \leq 5 \text{ or } 2x - 3 \geq -5$$

$$2x \leq 8$$

$$2x \geq -2$$

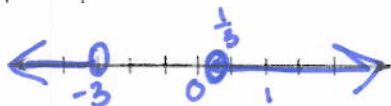
$$x \leq 4$$

$$x \geq -1$$

$$-1 \leq x \leq 4$$

Solve the absolute value inequality. Then graph the solution.

19.  $|3x + 4| > 5$



$$3x + 4 > 5 \text{ or } 3x + 4 < -5$$

$$3x > 1$$

$$3x < -9$$

$$x > \frac{1}{3}$$

$$x < -3$$

20. What is the quotient of -16 and 8?

$$\frac{-16}{8} = -2$$

21. Evaluate:  $6^2 - 4 \cdot 2 + 1$

$$36 - 8 + 1$$

$$28 + 1 = 29$$