

Name: \_\_\_\_\_

Unit 1: Geometry Basics

Date: \_\_\_\_\_ Period: \_\_\_\_\_

1.7: Distance & Midpoint Formula

**Directions:** Find the distance between each pair of points. Round to the nearest tenth if necessary.

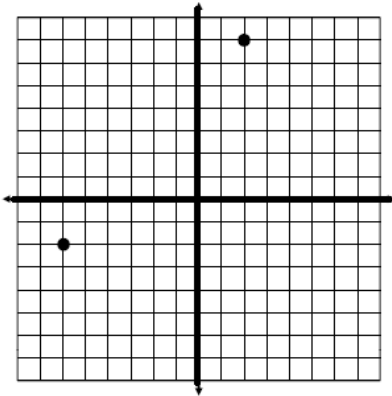
1.  $(-4, 6)$  and  $(3, -7)$

2.  $(-6, -5)$  and  $(2, 0)$

3.  $(-1, 4)$  and  $(1, -1)$

4.  $(0, -8)$  and  $(3, 2)$

5.



**Directions:** Find the coordinates of the midpoint of the segment given its endpoints.

6.  $A(5, 8)$  and  $B(-1, -4)$

7.  $M(-5, 9)$  and  $N(-2, 7)$

8.  $P(-3, -7)$  and  $Q(3, -5)$

9.  $F(2, -6)$  and  $G(-8, 5)$

**Directions:** Find the missing endpoint if **S** is the midpoint of  $\overline{RT}$ .

**10.**  $R(-9, 4)$  and  $S(2, -1)$ ; Find  $T$ .

**11.**  $S(-4, -6)$  and  $T(-7, -3)$ ; Find  $R$ .

**Directions:** Suppose **Q** is the midpoint of  $\overline{PR}$ . Use the information provided to find the missing value.

**12.**  $PQ = 3x + 14$  and  $QR = 7x - 10$ ; Find  $x$ .

**13.**  $PQ = 2x + 1$  and  $QR = 5x - 44$ ; Find  $PQ$ .

**14.**  $PQ = 6x + 25$  and  $QR = 16 - 3x$ ; Find  $PR$ .

**15.**  $PR = 9x - 31$  and  $QR = 43$ ; Find  $x$ .