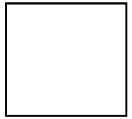


Name: _____

Unit 1: Geometry Basics



Date: _____ Per: _____

Homework 3: Distance & Midpoint Formulas

**** This is a 2-page document! ****

Directions: Find the distance between each pair of points.

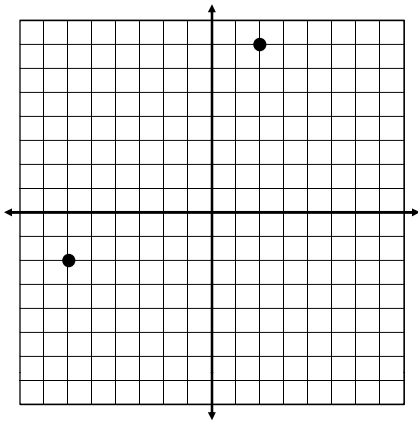
1. $(-4, 6)$ and $(3, -7)$

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 \overline{RT} .

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

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

12. B is the midpoint of \overline{AC} and E is the midpoint of \overline{BD} . If $A(-9, -4)$, $C(-1, 6)$, and $E(-4, -3)$, find the coordinates of D .

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

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

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

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

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