Kuta Software - Infinite Algebra 1

Name ANS key

The Distance Formula

Date_____ Period____

Find the distance between each pair of points.

1) $(7, 3)$, $(-1, -4)$

$\sqrt{113}$

2) $(3, -5)$, $(-3, 0)$

$\sqrt{61}$

3) $(6, -7)$, $(3, -5)$

$\sqrt{13}$

4) $(5, 1)$, $(5, -6)$

7

5) $(5, -8)$, $(-8, 6)$

$\sqrt{365}$

6) $(4, 6)$, $(-4, -3)$

$\sqrt{145}$

7) $(-7, 0)$, $(-2, -4)$

$\sqrt{41}$

8) $(-4, -3)$, $(1, 4)$

$\sqrt{74}$

9) $(-2, 2)$, $(-6, -8)$

$2\sqrt{29}$

10) $(6, 2)$, $(0, -6)$

10

11) $(-3, -1)$, $(-4, 0)$

$\sqrt{2}$

12) $(-5, 4)$, $(3, 1)$

$\sqrt{73}$

13) $(-2, 3)$, $(-1, 7)$

$\sqrt{17}$

14) $(8, -5)$, $(-1, -3)$

$\sqrt{85}$

Kuta Software - Infinite Geometry

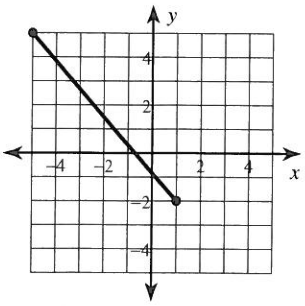
Name_____

The Distance Formula

Date_____ Period____

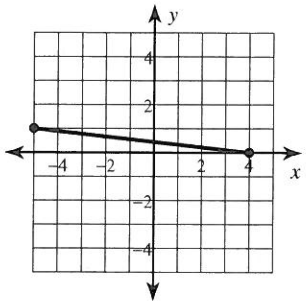
Find the distance between each pair of points. Round your answer to the nearest tenth, if necessary.

1)



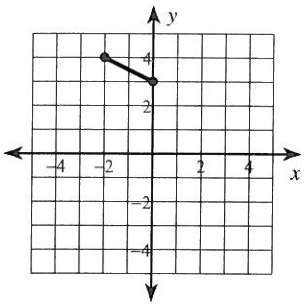
9.2

2)



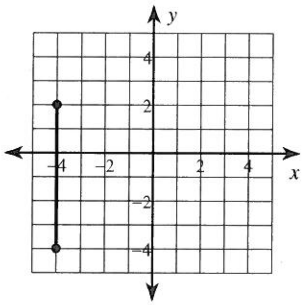
9.1

3)



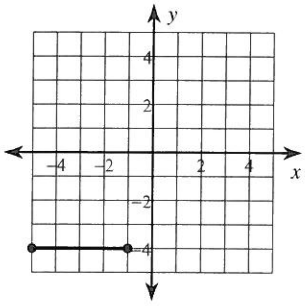
2.2

4)



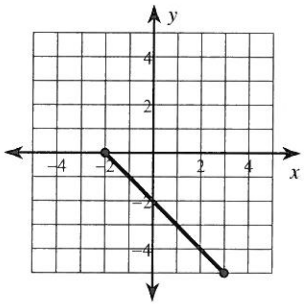
6

5)



4

6)



7.1

7) $(-2, 3)$, $(-7, -7)$

11.2

8) $(2, -9)$, $(-1, 4)$

13.3

9) $(5, 9)$, $(-7, -7)$

20

10) $(8, 5)$, $(-1, 3)$

9.2

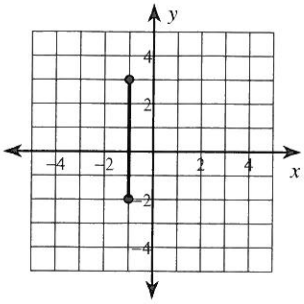
11) $(-10, -7)$, $(-8, 1)$

8.2

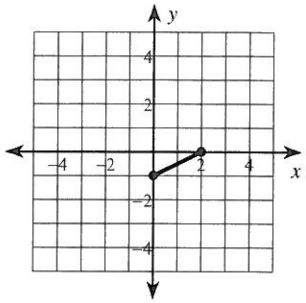
12) $(-6, -10)$, $(-2, -10)$

4

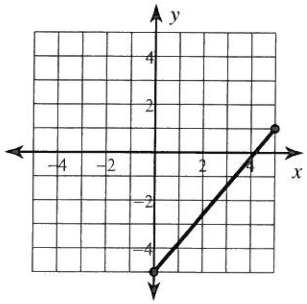
Find the distance between each pair of points.

13) 

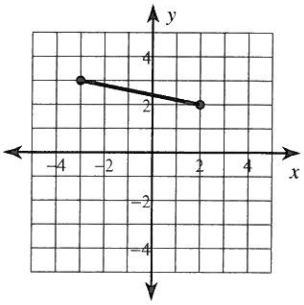
5

14) 

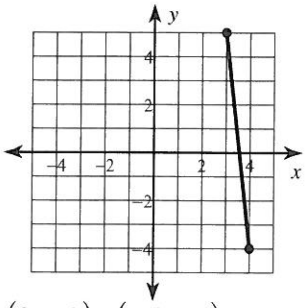
$\sqrt{5}$

15) 

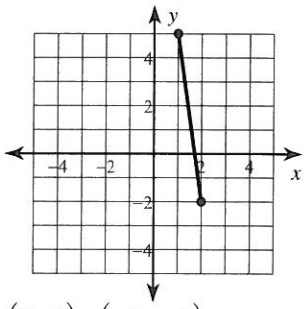
$\sqrt{61}$

16) 

$\sqrt{26}$

17) 

$\sqrt{82}$

18) 

$5\sqrt{2}$

19) $(0, -2)$, $(-5, -1)$

$\sqrt{26}$

20) $(6, 4)$, $(-5, -1)$

$\sqrt{146}$

21) $(3, 8)$, $(9, 10)$

$2\sqrt{10}$

22) $(10, 1)$, $(9, -4)$

$\sqrt{26}$

23) $(-8, 10)$, $(-6, 7)$

$\sqrt{13}$

24) $(-5, 6)$, $(8, -4)$

$\sqrt{269}$

Critical thinking questions:

25) Name a point that is $\sqrt{2}$ away from $(-1, 5)$.

$(0, 6)$, $(0, 4)$, $(-2, 6)$, or $(-2, 4)$

26) Name a point that is between 50 and 60 units away from $(7, -2)$ and state the distance between the two points.

Many answers. Ex: $(60, -2)$; 53 units

Kuta Software - Infinite Geometry

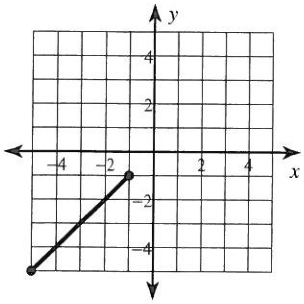
Name_____

The Midpoint Formula

Date_____ Period____

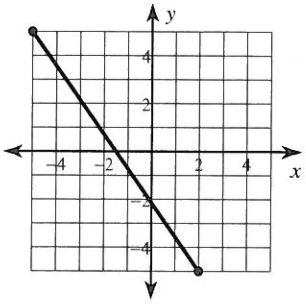
Find the midpoint of each line segment.

1)



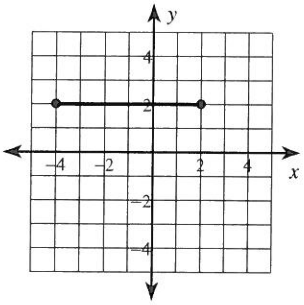
$(-3, -3)$

2)



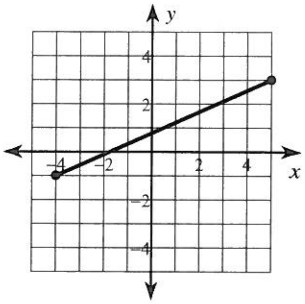
$\left(-1\frac{1}{2}, 0\right)$

3)



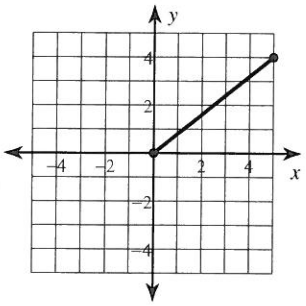
$(-1, 2)$

4)



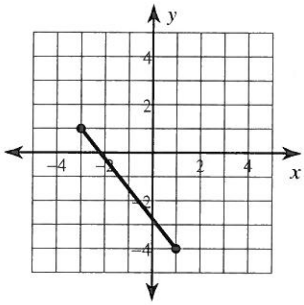
$\left(\frac{1}{2}, 1\right)$

5)



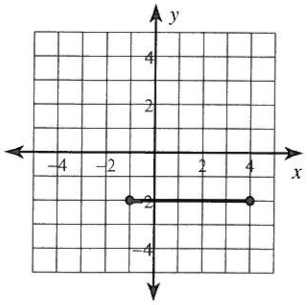
$\left(2\frac{1}{2}, 2\right)$

6)



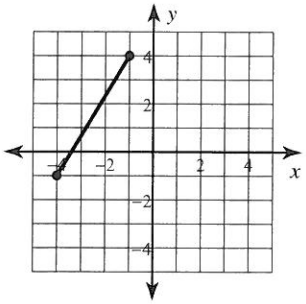
$\left(-1, -1\frac{1}{2}\right)$

7)



$\left(1\frac{1}{2}, -2\right)$

8)



$\left(-2\frac{1}{2}, 1\frac{1}{2}\right)$

Find the midpoint of the line segment with the given endpoints.

9) $(-4, 4)$, $(5, -1)$

$\left(\frac{1}{2}, 1\frac{1}{2}\right)$

10) $(-1, -6)$, $(-6, 5)$

$\left(-3\frac{1}{2}, -\frac{1}{2}\right)$

11) $(2, 4)$, $(1, -3)$

$\left(1\frac{1}{2}, \frac{1}{2}\right)$

12) $(-4, 4)$, $(-2, 2)$

$(-3, 3)$

13) $(5, 2)$, $(-4, -3)$

$\left(\frac{1}{2}, -\frac{1}{2}\right)$

14) $(-1, 1)$, $(5, -5)$

$(2, -2)$

15) $(2, -1)$, $(-6, 0)$

$\left(-2, -\frac{1}{2}\right)$

16) $(-3.1, -2.8)$, $(-4.92, -3.3)$

$(-4.01, -3.05)$

17) $(-5.1, -2)$, $(1.4, 1.7)$

$(-1.85, -0.15)$

18) $(4.9, -1.3)$, $(-5.2, -0.6)$

$(-0.15, -0.95)$

19) $(5.1, 5.71)$, $(6, 3.6)$

$(5.55, 4.655)$

20) $(3.1, -2.1)$, $(-0.52, -0.6)$

$(1.29, -1.35)$

Find the other endpoint of the line segment with the given endpoint and midpoint.

21) Endpoint: $(-1, 9)$, midpoint: $(-9, -10)$

$(-17, -29)$

22) Endpoint: $(2, 5)$, midpoint: $(5, 1)$

$(8, -3)$

23) Endpoint: $(5, 2)$, midpoint: $(-10, -2)$

$(-25, -6)$

24) Endpoint: $(9, -10)$, midpoint: $(4, 8)$

$(-1, 26)$

25) Endpoint: $(-9, 7)$, midpoint: $(10, -3)$

$(29, -13)$

26) Endpoint: $(-6, 4)$, midpoint: $(4, 8)$

$(14, 12)$

Critical thinking questions:

27) Find the point that is one-fourth of the way from $(2, 4)$ to $(10, 8)$.

$(4, 5)$

28) One endpoint of a line segment is $(8, -1)$. The point $(5, -2)$ is one-third of the way from that endpoint to the other endpoint. Find the other endpoint.

$(-1, -4)$