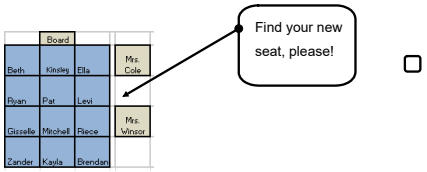
February 25, 2019, Monday

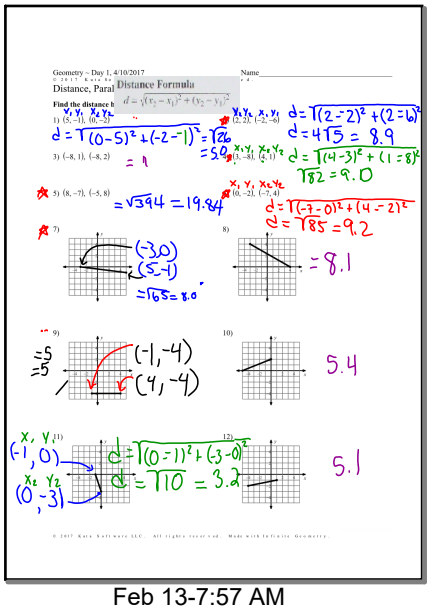
This is the EOC formula sheet for Geometry...

write down three eqns you have used before....

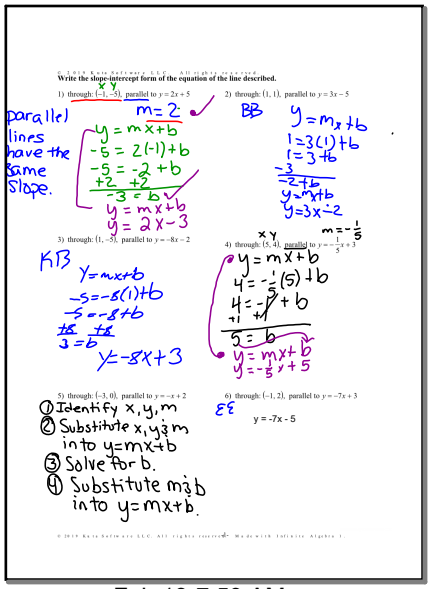
Define at least 5 of the variables in the eqns you have used...



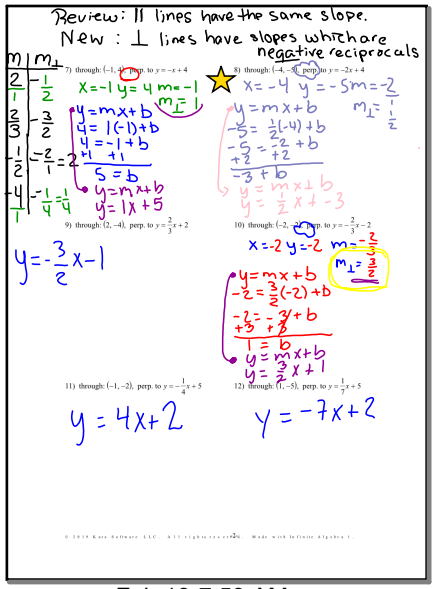
Feb 13-7:55 AM



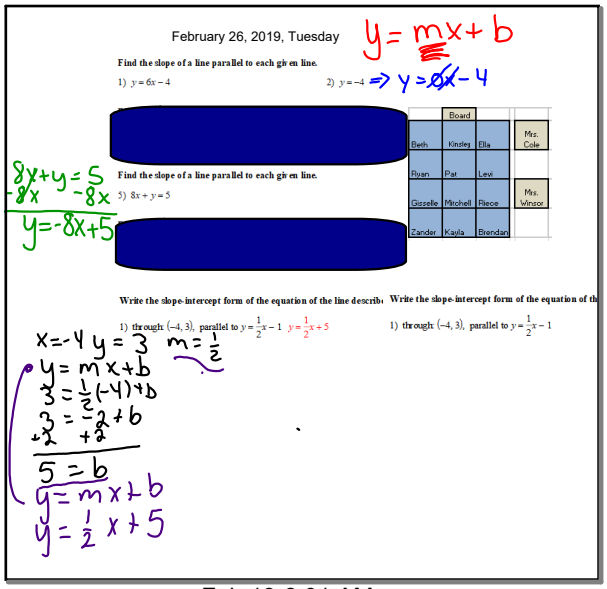
Feb 13-7:57 AM



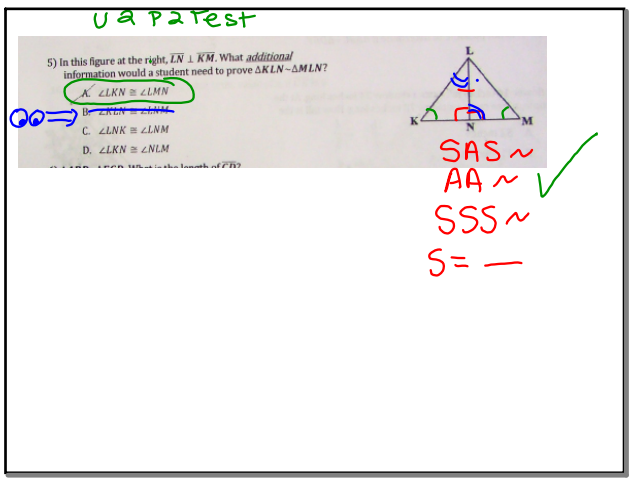
Feb 13-7:59 AM



Feb 13-7:59 AM



Feb 13-8:01 AM



Feb 26-12:20 PM

February 27, 2019 Wednesday

Parallel and Perpendicular Lines Name_____

Complete the table. Show all work

Equation	Slope (m)	Parallel Slope (//)	Perpendicular Slope (⊥)
1) $y = 8x + 9$	8	8	$-\frac{1}{8}$
2) $y = \frac{-5}{6}x - 4$	$-\frac{5}{6}$	$-\frac{5}{6}$	$\frac{6}{5}$
3) $y = -4x + 13$	$-\frac{4}{1}$	-4	$\frac{1}{4}$
4) $y = \frac{7}{9}x - 4$	$\frac{7}{9}$	$\frac{7}{9}$	$-\frac{9}{7}$
5) $-3x + 6y = 9$ $y = \frac{1}{2}x + \frac{3}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{2}{1} = -2$
6) $6x + 2y = 4$ $2y = -6x + 4$ $y = -3x + 2$	-3	-3	$\frac{1}{3}$

$-\frac{4}{1} \Rightarrow \frac{1}{4}$

$y = mx + b$

$-3x + 6y = 9$

$+3x \quad +3x$

$\frac{6y}{6} = \frac{3x+9}{6}$

$y = \frac{3x}{6} + \frac{9}{6}$

$y = \frac{1}{2}x + \frac{3}{2}$

Feb 27-7:44 AM

Parallel lines have the same slope.
Perpendicular lines have the negative reciprocal slope.

Algebra 1 Name_____

Distance, Parallel Slopes, Perpendicular Slopes Date_____ Period____

Find the distance between each pair of points.

1) (0, −1), (−5, 6) 2) (4, 7), (−1, 5)

$\sqrt{74} = 8.6$

3) 4)

Find the slope of a line parallel to each given line.

5) $y = \frac{1}{3}x + 4$ 6) $x - y = -4$

Scanned by CamScanner

Feb 13-8:01 AM

7) $-15 = 3y - 8x$

Find the slope of a line perpendicular to each given line.

8) $y = -4x + 4$ 9) $3x - 5y = 0$

10) $0 = 6 - 4x + 2y$

Write the slope-intercept form of the equation of the line described.

11) through: (1, −2), parallel to $y = 2x - 1$ 12) through: (−3, 3), perp. to $y = \frac{1}{5}x - 3$

$x = -3 \quad y = 3 \quad m = \frac{1}{5}$

① $y = mx + b$ $m_{\perp} = -5$

$3 = (-5)(-3) + b$ ② $y = mx + b$

$3 = 15 + b$ $y = -5x - 12$

$-15 \quad -15$

$-12 = b$

Scanned by CamScanner

Feb 13-8:01 AM

https://www.youtube.com/watch?v=SmxLYcvNsyM

YouTube Search

Partitioning a Segment

Partitioning a segment means to divide it up into pieces.

A **directed line segment** is a segment from one point to another point on the coordinate plane. Directed line segment $\overrightarrow{AB}$ would start at point A and end at point B.

Ex 1: Point P partitions directed line segment $\overrightarrow{AB}$ with A(-2, -5) and B (6, 1) into a ratio of 1:3. Find the coordinates of point P.

0:09 / 14:56

Copy the example and follow all the authors steps for this example of partitioning a line for example 1 & example 3!

Feb 27-7:38 AM

February 28, 2019, Thursday

Find the distance between each pair of points.

1) (0, −1), (−5, 6)

$d = \sqrt{(-5-0)^2 + (6-(-1))^2} = \sqrt{74}$

Find the slope of a line parallel to each given line.

6) $x - y = -4$ $y = x + 4$

$m_{\parallel} = 1$

Find the slope of a line perpendicular to each given line.

8) $y = -4x + 4$ $m = 4$ $m_{\perp} = \frac{1}{4}$

$M_{\perp} = \frac{1}{4}$

Recall:

y = mx + b

Feb 27-1:50 PM

Partitioning Segments by a Ratio

Partitioning Segments

$(x_2 - x_1)\left(\frac{a}{a+b}\right) + x_1$

1) A is at 1, and B is at 10. Find the point, T, so that T partitions A to B in a 2:3 ratio.

2) A is at -2 and B is at 14. Find the point, T, so that T partitions A to B in a 3:1 ratio.

3) A is at -2 and B is at 7. Find the point, T, so that T partitions A to B in a 1:2 ratio.

4) A is at -5 and B is at 5. Find the point, T, so that T partitions A to B in a 2:3 ratio.

$(10 - 1)\left(\frac{2}{2+1}\right) + 1$

$(14 - (-2))\left(\frac{3}{3+1}\right) + -2$

10

Feb 25-2:26 PM

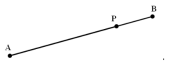
Lesson 3: Partitioning a Line Segment

Standard: G.GPE.6: Use coordinates to prove simple geometric theorems algebraically. **Standard: G.GPE.6:** Find the point on a directed line segment between two given points that partitions the segment in a given ratio.

Essential Question: How can a line be partitioned? How do you find the point of a directed line segment that partitions the segment in a given ratio?

Point P divides $\overline{AB}$ in the ratio 3 to 1.

1. What does this mean? Prove it!



2. Do you expect point P to be closer to A or closer to B? Why?

3. How does the slope of $\overline{AP}$ compare with slope of $\overline{AB}$? Why?

Find the coordinate of point P that lies along the directed line segment from A (3, 4) to B (6, 10) and partitions the segment in the ratio of 3 to 2.

A ***directed line segment*** means the line segments has a direction associated with it, usually specified by moving from one endpoint to the other.
Tells the direction in which from which point to start and end. In this case, from Point A to Point B, therefore point A must be labeled A (x_1, y_1) and B (x_2, y_2)

What does that tell you about the distance AP and PB in relation to AB?

1. Label your points (x_1, y_1) and B (x_2, y_2)
   Note: since it is a directed segment, **order does matter.**
2. Convert the ratio into a percent (keep as a fraction) $a:b$
   Percent ratio (%) $= \frac{a}{a+b}$
3. Find the rise and run for the segment (**order does matter**)
   rise: $y_2 - y_1$ run: $x_2 - x_1$
4. To find the partitioning point:
   $x-$ coordinate: $x_1 +$ run (% *in fraction form*)
   $y-$ coordinate: $y_1 +$ rise (% *in fraction form*)

How can you use the distance formula to check that P partitions $\overline{AB}$ in the ratio of 3 to 2?

Feb 13-8:03 AM

Example 1:
Find the coordinates of the point P that lies along the directed segment from A (1, 1) to B (7, 3) and partitions the segment in the ratio of 1 to 4

Coordinates of point which partitions a directed line segment AB at the ratio of $a:b$ from $A(x_1, y_1)$ to $B(x_2, y_2)$

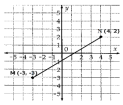
$$(x, y) = \frac{bx_1 + ax_2}{b+a}, \frac{by_1 + ay_2}{b+a}$$

OR

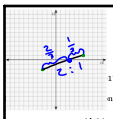
$$(x, y) = \left(x_1 + \frac{a}{a+b}(x_2 - x_1), y_1 + \frac{a}{a+b}(y_2 - y_1)\right)$$

Example 2:
Find the coordinate of the point P that lies along the directed segment from C (-3, -2) to D(6,1) and partitions the segment in the ratio 2 to 1.

Example 3:
Find the coordinates of point P that lies along the directed line segment from M to N and partitions the segment in the ratio of 3 to 2



Feb 13-8:05 AM



Coordinates of point which partitions a directed line segment AB at the ratio of $a:b$ from $A(x_1, y_1)$ to $B(x_2, y_2)$

$$(x, y) = \frac{bx_1 + ax_2}{b+a}, \frac{by_1 + ay_2}{b+a}$$

OR

$$(x, y) = \left(x_1 + \frac{a}{a+b}(x_2 - x_1), y_1 + \frac{a}{a+b}(y_2 - y_1)\right)$$

17 Pai ning point for eac ve

1) Given the point A(-3, -2) and B(6, 1), find the coordinates of the point P on directed line segment AB that partition AB in the ratio 2 to 1.

x_1, y_1 x_2, y_2
$x_1 + \frac{a}{a+b}(x_2 - x_1)$, $y_1 + \frac{a}{a+b}(y_2 - y_1)$
$-3 + \frac{2}{2+1}(6 - 3)$, $-2 + \frac{2}{2+1}(1 - -2)$
$(3, 0)$

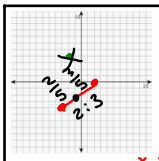
2) Given the points A(-2, 5) and B(2, 3), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 4 to 1.

3) Given the points A(5, -1) and B(-5, 3), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 1:3.

4) Given the points A(-2, 1) and B(4, 5), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 5:2.

5) Find the coordinates of P so that P partitions the segment AB in the ratio 5:1 if A(2, 4) and B(8, 10).

Feb 13-8:06 AM



Coordinates of point which partitions a directed line segment AB at the ratio of $a:b$ from $A(x_1, y_1)$ to $B(x_2, y_2)$

$$(x, y) = \frac{bx_1 + ax_2}{b+a}, \frac{by_1 + ay_2}{b+a}$$

OR

$$(x, y) = \left(x_1 + \frac{a}{a+b}(x_2 - x_1), y_1 + \frac{a}{a+b}(y_2 - y_1)\right)$$

2) Given the points A(-3, -4) and B(2, 0), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 2 to 3.

x_1, y_1 x_2, y_2
$\left(-3 + \frac{2}{2+3}(2 - -3), -4 + \frac{2}{2+3}(0 - -4)\right)$
$(-1, -2.4)$

Feb 28-1:10 PM

7) Find the coordinates of P so that P partitions the segment AB in the ratio 1 to 3 if A(-5, 4) and B(7, -4).

8) Find the coordinates of P so that P partitions the segment AB in the ratio 3:4 if A(-9, -9) and B(5, -2).

9) Find the coordinates of P so that P partitions the segment AB in the ratio 5 to 2 if A(-8, -2) and B(6, 19).

10) Find the coordinates of P so that P partitions the segment AB in the ratio 7 to 2 if A(-5, 4) and B(-8, -2).

Find the point that partitions the segment with the two given endpoints with the given ratio.

11) (-3, 4) (7, 6) 1:1

12) (-9, 3) (1, 8) 2:3

13) (8, -5) (4, 7) 1:3

14) (5, -6) (4, 5) 3:4

Feb 13-8:06 AM

February 29, 2019, Friday

Find the coordinates of P so that P partitions the segment AB in the ratio 5 to 2 if A(-8, -2) and B(6, 19).

Find the point that partitions the segment with the two given endpoints with the given ratio.

11) (-3, 4) (7, 6) 1:1

Feb 13-8:06 AM

Geometry ~ Day 3 Name _____

Equations of a Circle

Identify the center and radius of each.

1) $(x-6)^2+(y-13)^2=16$

2) $(x+8)^2+(y-12)^2=22$

3) $(x+4)^2+(y+5)^2=64$

4) $(x+10)^2+(y+15)^2=11$

5) $(x-11)^2+(y+10)^2=36$

6) $(x-12)^2+(y-4)^2=9$

Use the information provided to write the equation of each circle.

7) Center: (−9, 11)
Radius: 8

8) Center: (13, −7)
Radius: 4

9) Center: (−13, 9)
Radius: 3

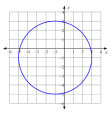
10) Center: (15, −12)
Radius: 2

11) Center: (4, 2)
Radius: 13

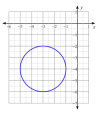
12) Center: (5, 6)
Radius: 3

Use the information provided to write the equation of each circle in standard form, then convert to general form.

13)

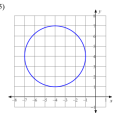


14)

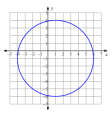


Feb 13-8:08 AM

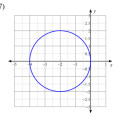
15)



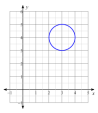
16)



17)



18)



  Made with Infinite Geometry.

Feb 13-8:09 AM

Geometry ~ Day 3 Name _____ ID: 1

TOTD ~ Parallel, Perpendicular, Partitioning, Equations of Circles

Write the slope-intercept form of the equation of the line described.

1) through: (−2, −3), parallel to $y=-8x+1$

2) through: (5, −1), perp. to $y=x+3$

Identify the center and radius of each.

3) $(x+4)^2+(y-6)^2=80$

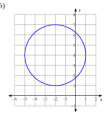
Use the information provided to write the equation of each circle.

4) Center: (16, 9)
Radius: 2

5) Find the coordinates of P so that P partitions the segment AB in the ratio 2:5 if A(-9, -9) and B(5, -2).

Use the information provided to write the equation of each circle in standard form, then convert to general form.

6)



Feb 13-8:10 AM

then SG.....

Geometry ~ Day 3 Name _____ ID: 2

TOTD ~ Parallel, Perpendicular, Partitioning, Equations of Circles

Write the slope-intercept form of the equation of the line described.

1) through: (−3, −2), parallel to $y=2x+1$

2) through: (3, −5), perp. to $y=\frac{1}{3}x-5$

Identify the center and radius of each.

3) $(x-13)^2+(y+7)^2=21$

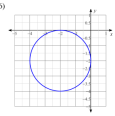
Use the information provided to write the equation of each circle.

4) Center: (11, −4)
Radius: 7

5) Find the coordinates of P so that P partitions the segment AB in the ratio 1:3 if A(-5, 4) and B(7, -4).

Use the information provided to write the equation of each circle in standard form, then convert to general form.

6)

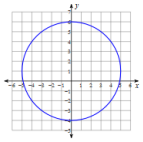


Feb 13-8:11 AM

February 28, 2019, Thursday

Use the information provided to write th

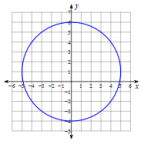
1)



$x^2+(y-1)^2=25$

Use the information provided to write the standard form equation of each circle.

1)



2) Center: (−1, −3)
Radius: 13

Feb 13-8:12 AM

Unit 5
Is the point inside, outside, or on the circle?

Name _____
Date _____ 8 _____

EXAMPLE **Use the Equation of a Circle**

The equation of a circle is $(x-5)^2+(y-1)^2=9$. Without sketching the circle, tell whether the point is *on* the circle, *inside* the circle, or *outside* the circle.

a. (6, 0) **b.** (8, 2)

Solution

Substitute the coordinates of the point into the equation.

If the left side is *less than* the right side, the point is *inside* the circle.

If the left side is *greater than* the right side, the point is *outside* the circle.

a. $(x-5)^2+(y-1)^2=9$
$(6-5)^2+(0-1)^2 \stackrel{?}{>} 9$
$1^2+(-1)^2 \stackrel{?}{>} 9$
$2<9$

Because $2<9$, the point (6, 0) is *inside* the circle.

b. $(x-5)^2+(y-1)^2=9$
$(8-5)^2+(2-1)^2 \stackrel{?}{>} 9$
$3^2+1^2 \stackrel{?}{>} 9$
$10>9$

Because $10>9$, the point (8, 2) is *outside* the circle.

Equation of a Circle **The equation of a circle is $(x-2)^2+(y+3)^2=4$. Tell whether the point is *on* the circle, *inside* the circle, or *outside* the circle. Use the example above as a model.**

28. $R(0, 0)$ **29.** $A(2, -4)$ **30.** $X(0, -3)$ **31.** $K(3, -1)$

32. $M(1, -4)$ **33.** $T(2, -5)$ **34.** $D(2, 0)$ **35.** $Z(2.5, -3)$

Feb 13-8:22 AM

Geometry Name_____ ID: 1

Unit 5 SG 1 Date_____ Period____

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

1)

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

Write the slope-intercept form of the equation of the line described.

3) through: $(5, -2)$, parallel to $y = -\frac{4}{5}x + 4$

4) through: $(5, 2)$, perp. to $y = -\frac{5}{2}x + 5$

Find the slope of a line parallel to each given line.

5) $y = \frac{3}{2}x - 1$

6) $x + 4y = 0$

Find the slope of a line perpendicular to each given line.

7) $y = \frac{1}{2}x + 1$

8) $x + 2y = -6$

9) Partitioning: Given the points A(5, -1) and B(-5, 3), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio of 1:3.

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

10) $(3, -6)$, $(3, 0)$

Given the midpoint and one endpoint of a line segment, find the other endpoint.

11) Endpoint: $(4, -1)$, midpoint: $(-6, -1)$

Feb 13-8:26 AM

Geometry Name_____ ID: 1

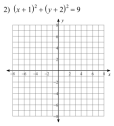
Unit 5 SG 1 Date_____ Period____

Use the information provided to write the standard form equation of each circle.

1) Center: $(10, 2)$
Radius: 6

Identify the center and radius of each. Then sketch the graph.

2) $(x + 1)^2 + (y + 2)^2 = 9$

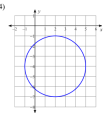


Use the information provided to write the general conic form equation of each circle.

3) $x^2 + (y - 7)^2 = 9$

Use the information provided to write the standard form equation of each circle.

4)



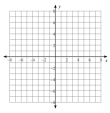
Feb 13-8:27 AM

Geometry Name_____ ID: 1

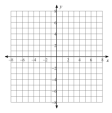
Circles, writing in different equation forms Date_____ Period____

Identify the center and radius of each. Then sketch the graph.

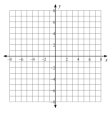
1) $(x + 3)^2 + (y + 3)^2 = 4$



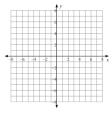
2) $(x + 3)^2 + y^2 = 16$



3) $(x - 3)^2 + (y - 3)^2 = 9$



4) $(x - 3)^2 + (y + 2)^2 = 4$



Feb 13-8:29 AM

Use the information provided to write the general conic form equation of each circle.

5) $(x - 14)^2 + (y - 1)^2 = 9$

6) $(x - 15)^2 + (y - 2)^2 = 16$

7) $(x + 12)^2 + (y + 16)^2 = 4$

8) $(x - 5)^2 + (y - 13)^2 = 36$

Use the information provided to write the standard form equation of each circle.

9) $x^2 + y^2 + 16x - 18y + 129 = 0$

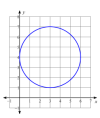
10) $x^2 + y^2 + 22x - 18y + 153 = 0$

11) $x^2 + y^2 + 24x + 10y + 120 = 0$

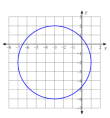
12) $x^2 + y^2 + 8x + 14y + 61 = 0$

Feb 13-8:30 AM

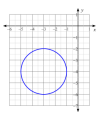
13)



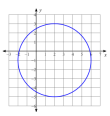
14)



15)



16)



Feb 13-8:30 AM

March 1, 2019, Friday

Copy the midpoint formula and the distance formula

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

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

1) $(-5, -5)$, $(0, 4)$

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

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

...quiz after distance & midpoint practice

Feb 13-8:30 AM

Geometry Name_____ ID: 1

Midpoints & Distances Date_____ Period____

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

1) (−5, 2), (0, 2)
2) (1, 0), (2, 0)
3) (0, 6), (−4, −3)
4) (−3, −6), (1, −1)
5) (1, 5), (−5, 5)
6) (6, 2), (−3, −2)
7) (4, −2), (5, 1)
8) (5, −3), (1, −3)

Given the midpoint and one endpoint of a line segment, find the other endpoint.

9) Endpoint: (−6, 1), midpoint: (3, −2)
10) Endpoint: (4, 4), midpoint: (6, 0)
11) Endpoint: (−5, −3), midpoint: (4, −4)
12) Endpoint: (1, −5), midpoint: (−2, 6)
13) Endpoint: (2, −1), midpoint: (0, −1)
14) Endpoint: (0, 1), midpoint: (6, −1)
15) Endpoint: (5, 3), midpoint: (4, 3)
16) Endpoint: (2, 0), midpoint: (0, −2)

Feb 13-8:33 AM

Find the distance between each pair of points.

17) (2, 6), (8, 5)
18) (−8, 8), (0, 2)
19) (0, −1), (5, −5)
20) (−7, −5), (−4, −8)
21) (4, 3), (5, −3)
22) (7, −2), (0, −5)
23) (5, 6), (7, −1)
24) (4, −3), (1, 3)
25)
26)
27)
28)

Feb 13-8:33 AM

....quiz

Feb 13-8:33 AM

Feb 13-9:53 AM