

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...

	Board			
Barb	Kristley	Ella		Ms. Cole
Plyan	Pat	Levi		
Griselle	Michael	Piace		Ms. Windsor
Zander	Karla	Brandon		

Find your new seat, please!

Feb 13-7:55 AM

Geometry - Day 1, 4/10/2017

Distance, Para Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Find the distance d

1) $(5, -1), (2, -4)$ $d = \sqrt{(2-5)^2 + (-4-(-1))^2} = \sqrt{9+9} = \sqrt{18} = 3\sqrt{2} \approx 4.24$

2) $(-8, 1), (-8, 2)$ $d = \sqrt{(-8-(-8))^2 + (2-1)^2} = \sqrt{0+1} = 1$

3) $(-8, 1), (-8, 2)$ $d = \sqrt{(0-5)^2 + (-2-(-1))^2} = \sqrt{25+1} = \sqrt{26} \approx 5.1$

4) $(-2, 2), (2, -6)$ $d = \sqrt{(2-(-2))^2 + (-6-2)^2} = \sqrt{16+64} = \sqrt{80} = 4\sqrt{5} \approx 8.9$

5) $(6, -7), (-5, 8)$ $d = \sqrt{(-5-6)^2 + (8-(-7))^2} = \sqrt{121+225} = \sqrt{346} \approx 18.6$

6) $(-7, -2), (4, -2)$ $d = \sqrt{(4-(-7))^2 + (-2-(-2))^2} = \sqrt{81+0} = 9$

7) $(-3, 0), (5, -1)$ $d = \sqrt{(5-(-3))^2 + (-1-0)^2} = \sqrt{64+1} = \sqrt{65} \approx 8.1$

8) $(-1, -4), (4, -4)$ $d = \sqrt{(4-(-1))^2 + (-4-(-4))^2} = \sqrt{25+0} = 5$

9) $(-1, 0), (0, -3)$ $d = \sqrt{(0-(-1))^2 + (-3-0)^2} = \sqrt{1+9} = \sqrt{10} \approx 3.2$

Feb 13-7:57 AM

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

1) through $(-1, 2)$, parallel to $y = 2x + 5$ $m = 2$

2) through $(1, 1)$, parallel to $y = 3x - 5$ $m = 3$

3) through $(1, -2)$, parallel to $y = -8x - 2$ $m = -8$

4) through $(5, 4)$, parallel to $y = -\frac{1}{3}x + 3$ $m = -\frac{1}{3}$

5) through $(-3, 0)$, parallel to $y = -x + 2$ $m = -1$

6) through $(-1, 2)$, parallel to $y = -7x + 3$ $m = -7$

parallel lines have the same slope.

$y = mx + b$

$-5 = 2(-1) + b$
 $-5 = -2 + b$
 $-3 = b$
 $y = 2x - 3$

$1 = 3(1) + b$
 $1 = 3 + b$
 $-2 = b$
 $y = 3x - 2$

$5 = -8(1) + b$
 $5 = -8 + b$
 $13 = b$
 $y = -8x + 13$

$4 = -\frac{1}{3}(5) + b$
 $4 = -\frac{5}{3} + b$
 $11\frac{1}{3} = b$
 $y = -\frac{1}{3}x + 11\frac{1}{3}$

$0 = -(-3) + b$
 $0 = 3 + b$
 $-3 = b$
 $y = -x - 3$

$2 = -7(-1) + b$
 $2 = 7 + b$
 $-5 = b$
 $y = -7x - 5$

1) Identify x, y, m
 2) Substitute x, y, m into $y = mx + b$
 3) Solve for b
 4) Substitute m, b into $y = mx + b$

Feb 13-7:59 AM

Review: If lines have the same slope, they are parallel.

New: \perp lines have slopes which are negative reciprocals.

7) through $(-1, 4)$, perp. to $y = -x + 4$ $m = 1$

8) through $(-4, -5)$, perp. to $y = -2x + 4$ $m = \frac{1}{2}$

9) through $(2, -4)$, perp. to $y = \frac{3}{5}x + 2$ $m = -\frac{5}{3}$

10) through $(-2, -2)$, perp. to $y = -\frac{2}{3}x - 2$ $m = \frac{3}{2}$

11) through $(-1, -2)$, perp. to $y = -\frac{1}{2}x + 5$ $m = 2$

12) through $(-5, 1)$, perp. to $y = -\frac{1}{2}x + 5$ $m = 2$

$x = -1, y = 4, m = 1$
 $y = mx + b$
 $4 = 1(-1) + b$
 $4 = -1 + b$
 $5 = b$
 $y = x + 5$

$x = -4, y = -5, m = \frac{1}{2}$
 $y = mx + b$
 $-5 = \frac{1}{2}(-4) + b$
 $-5 = -2 + b$
 $-3 = b$
 $y = \frac{1}{2}x - 3$

$x = 2, y = -4, m = -\frac{5}{3}$
 $y = mx + b$
 $-4 = -\frac{5}{3}(2) + b$
 $-4 = -\frac{10}{3} + b$
 $-\frac{2}{3} = b$
 $y = -\frac{5}{3}x - \frac{2}{3}$

$x = -2, y = -2, m = \frac{3}{2}$
 $y = mx + b$
 $-2 = \frac{3}{2}(-2) + b$
 $-2 = -3 + b$
 $1 = b$
 $y = \frac{3}{2}x + 1$

$x = -1, y = -2, m = 2$
 $y = mx + b$
 $-2 = 2(-1) + b$
 $-2 = -2 + b$
 $0 = b$
 $y = 2x$

$x = -5, y = 1, m = 2$
 $y = mx + b$
 $1 = 2(-5) + b$
 $1 = -10 + b$
 $11 = b$
 $y = 2x + 11$

Feb 13-7:59 AM

Algebra 1

Distance, Parallel Slopes, Perpendicular Slopes

Find the distance between each pair of points.

1) $(6, -1), (-5, 6)$ 2) $(4, 7), (-1, 5)$

3)

4)

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

5) $y = \frac{1}{2}x + 4$ 6) $x - y = -4$

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

Feb 13-8:01 AM

February 26, 2019, Tuesday $y = mx + b$

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

1) $y = 6x - 4$ 2) $y = -4 \Rightarrow y = 0x - 4$

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

3) $8x + y = 5$

$8x + y = 5$
 $-8x \quad -8x$
 $y = -8x + 5$

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

1) through $(-4, 3)$, parallel to $y = \frac{1}{2}x - 1$ 2) through $(-4, 3)$, parallel to $y = \frac{1}{2}x - 1$

$x = -4, y = 3, m = \frac{1}{2}$

$y = mx + b$
 $3 = \frac{1}{2}(-4) + b$
 $3 = -2 + b$
 $5 = b$
 $y = mx + b$
 $y = \frac{1}{2}x + 5$

Board			
Boh	Kinsley	Ella	Ms. Cole
Dylan	Par	Levi	
Gaspard	Michael	Dece	Ms. Infanzon
Ender	Kayla	Brandon	

Feb 13-8:01 AM

Ua Pa Test

5) In this figure at the right, $LN \perp KM$. What additional information would a student need to prove $\triangle KLN \cong \triangle MLN$?

A. $\angle LKN \cong \angle LMN$

B. $\angle LKN \cong \angle LMN$

C. $\angle LNK \cong \angle LNM$

D. $\angle LKN \cong \angle LNM$

$SAS \sim$
 $AA \sim$
 $SSS \sim$
 $S = -$

Feb 26-12:20 PM

Name: _____ Date: _____

Partitioning Segments by a Ratio

Partitioning Segments

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

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

4) A is at 6 and B is at 5. Find the point, T, so that T partitions A to B in a 2:3 ratio.

Feb 25-2:26 PM

Lesson 3: Partitioning a Line Segment

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{PB} ? Why?

Find the coordinate of point P that lies along the directed segment from A(1, 4) to B(9, 10) and partitions the segment in the ratio of 3 to 1.

A directed line segment means the line segments has a direction associated with it, usually specified by naming from one endpoint to the other. Tell the direction in which T runs which point is start and end. In this case, from Point A to Point B, therefore point A must be labeled A(x₁, y₁) and B(x₂, y₂)

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

1. Label your points A(x₁, y₁) and B(x₂, y₂)
 Note: since A is a directed segment, label the starting point as A(x₁, y₁) and B(x₂, y₂)
 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:
 a = coordinate of x, b = run (in Fractional form)
 y = coordinate of y + rise (in Fractional form)

How can you use the distance formula to check that P partitions \overline{AB} in the ratio of 3 to 1?

Feb 13-8:03 AM

Coordinates of point P which partitions a directed line segment AB at the ratio of a:b

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

Example 1: Find the coordinates of the point P that lies along the directed segment from A(1, 2) to B(5, 3) and partitions the segment in the ratio of 2 to 4.

Example 2: Find the coordinate of the point P that lies along the directed segment from C(1, -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(-2, 1) to N(4, 2) and partitions the segment in the ratio of 3 to 2.

Feb 13-8:05 AM

Geometry - Day 2, 4/11/2017 Partitioning Line Segment HW Name _____

Directions: Find the partitioning point for each problem. You must show your work for all steps to receive credit.

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

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.

3) 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.

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

5) 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.

6) 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

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 27, 2019, Wednesday

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 _____ ID: 1

TOTD - Parallel, Perpendicular, Partitioning, Equations of Circles

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

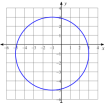
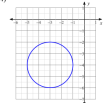
Use the information provided to write the equation of each circle.

7) Center: (-9, 11) 8) Center: (13, -7)
Radius: 8 Radius: 4

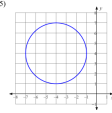
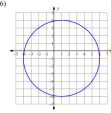
9) Center: (-13, 9) 10) Center: (15, -12)
Radius: 3 Radius: 2

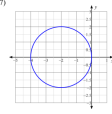
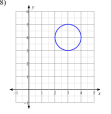
11) Center: (4, 2) 12) Center: (5, 6)
Radius: 13 Radius: 3

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) 

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.

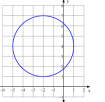
3) $(x + 4)^2 + (y - 6)^2 = 80$

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(8, -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.

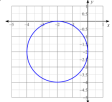
3) $(x - 13)^2 + (y + 7)^2 = 21$

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.

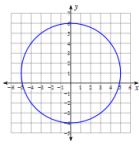
6) 

Feb 13-8:11 AM

February 28, 2019, Thursday

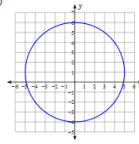
Use the information provided to write the standard form equation of each circle.

1)



$x^2 + (y + 3)^2 = 25$

2) Center: $(-1, -3)$
Radius: 13



Feb 13-8:12 AM

Name: _____ Date: _____

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

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. $(x - 5)^2 + (y - 1)^2 = 9$ b. $(x - 5)^2 + (y - 1)^2 = 9$
 $(6 - 5)^2 + (0 - 1)^2 \leq 9$ $(8 - 5)^2 + (2 - 1)^2 \leq 9$
 $1^2 + (-1)^2 \leq 9$ $3^2 + 1^2 \leq 9$
 $2 < 9$ $10 > 9$

Because $2 < 9$, the point $(6, 0)$ is *inside* the circle. Because $10 > 9$, the point $(8, 2)$ is *outside* the circle.

Equation of a Circle The equation of a circle is $(x - 2)^2 + (y + 2)^2 = 4$. 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

Name: _____ ID: 1

Geometry 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 $y = -\frac{4}{3}x + 4$ 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

Name: _____ ID: 1

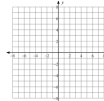
Geometry Unit 5 SG 1 Date: _____ Period: _____

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.

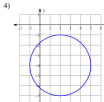
2) $(x + 1)^2 + (y + 2)^2 = 9$



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

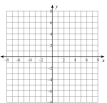
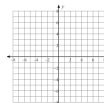
Name: _____ ID: 1

Geometry Unit 5 SG 1 Date: _____ Period: _____

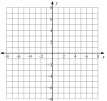
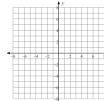
Circles, writing in different equation forms.

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.

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) $(1, 3), (-5, 5)$ 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: $(0, -2)$

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Find the distance between each pair of points.

17) $(2, 6), (8, 5)$ 18) $(-8, 8), (0, 2)$

19) $(6, -1), (5, -5)$ 20) $(-7, -5), (-4, -8)$

21) $(4, 3), (5, -3)$ 22) $(7, -2), (0, -9)$

23) $(5, 6), (7, -1)$ 24) $(4, -3), (1, 3)$

25)

26)

27)

28)

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