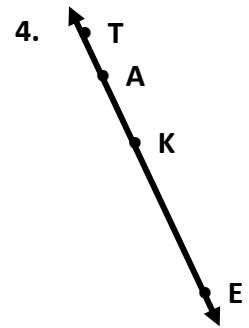
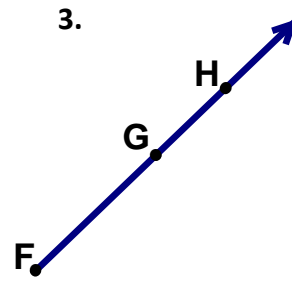
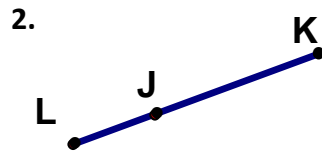
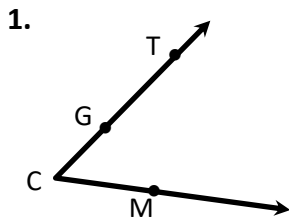


Unit 6 -Geometry REVIEW

Use correct notation and name each figure **TWO** different ways.



5. Graph the following equations on the coordinate grid:

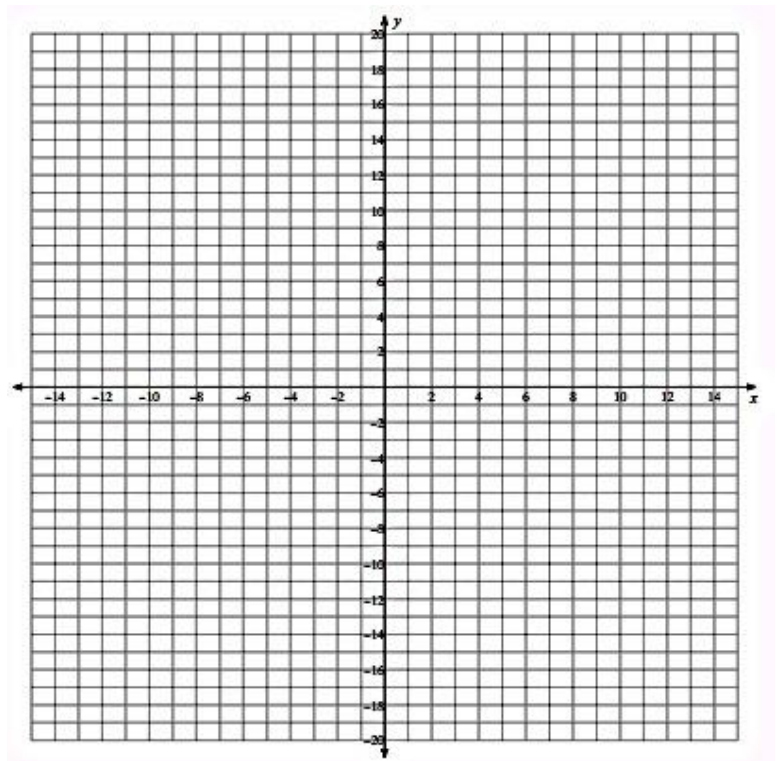
A) $y = \frac{1}{3}x - 5$

B) $y = -x$

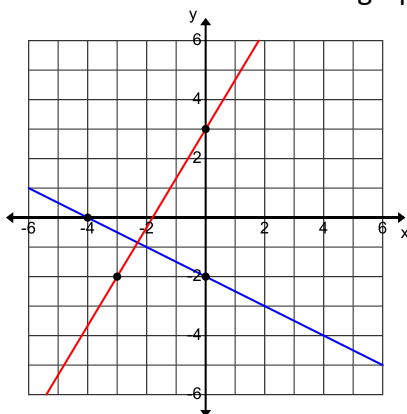
C) $y = -1 + 4(x + 12)$

D) $y = -10 + \frac{9}{2}(x - 12)$

E) $y = 3 + \frac{11}{7}(x + 5)$



6. Determine if the two lines graphed are perpendicular. Give a mathematical justification.



The harder you work, the smarter you get!



For #7-8, write the equation in point-slope form. Then simplify to slope-intercept form.

7. Write the equation of a line **perpendicular** to

a. $y = \frac{2}{3}x + 4$ and passes through the point $(-1, 2)$

b. $y = -2x + 5$ and passes through $(-4, 6)$

8. Write the equation of a line **parallel** to

a. $y = \frac{1}{2}x - 7$ and passes through the point $(8, 7)$

b. $y = -3x + 1$ and passes through $(-2, 5)$

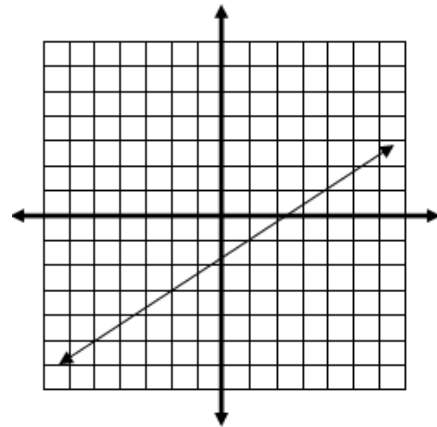
9. a. Write the equation of the line to the right.

b. Draw a line parallel to it.

c. Write the equation of the parallel line.

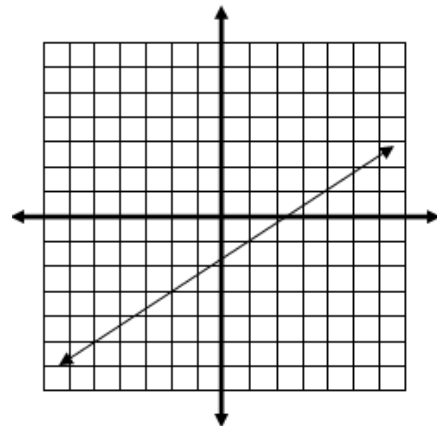
d. Draw a line perpendicular to the original.

e. Write the equation of the perpendicular line.



10a. Draw a line perpendicular to the line at the right, through the point $(-3, -1)$.

b. Write the equation of the perpendicular line.



Simplify the following:

11a. $\sqrt{75}$

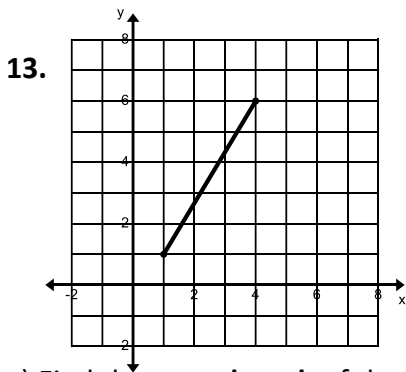
b. $\sqrt{200}$

c. $\sqrt{26}$

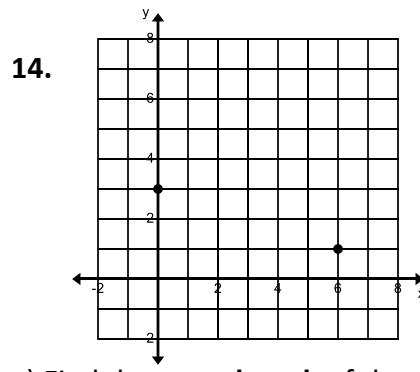
d. $\sqrt{40}$

12a. $\sqrt{2} + \sqrt{3} + \sqrt{8}$

b. $\sqrt{5} + \sqrt{13} + \sqrt{5} + 8 + \sqrt{5}$



- Find the **exact length** of the segment:
- Approximate:
- Find the **midpoint** of the segment:
- Find the **slope** of the segment:



- Find the **exact length** of the segment connecting the points:
- Approximate:
- Find the **midpoint** of the segment:
- Find the **slope** of the segment:

15. Find the **distance** between the two given points; give exact and approximate lengths.

a) (2, -3) and (-5, 6)

b) (0, 9) and (7, -1)

Exact length:

Approximate:

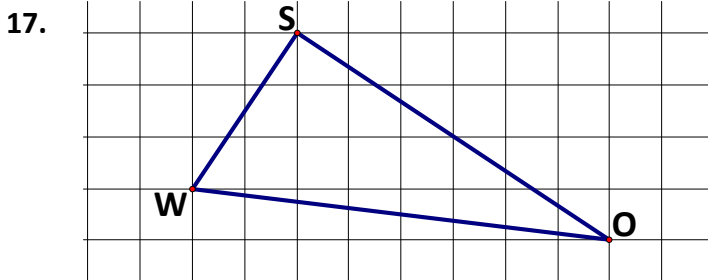
Exact length:

Approximate:

16. Find the **midpoint** of the line between the two given points.

a) (4, 6) and (-3, -9)

b) (2, -3) and (-5, 6)



a) Find the slope of \overline{SO}

b) Find the slope of \overline{WO}

c) Find the slope of \overline{WS}

d) Is this a right triangle?
How do you know?

e) Find SO

f) Find OW

g) Find WS

h) Find the **exact** perimeter of $\triangle SOW$:

i) Find the **approximate** perimeter:

j) Find the area of $\triangle SOW$:

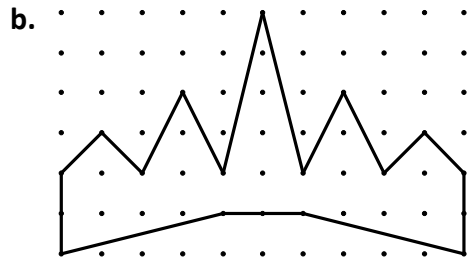
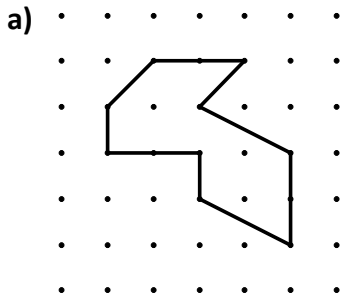
18. Determine if the triangle with the following vertices is a right triangle. (Draw a rough sketch.)

If the triangle is a right triangle, find the area.

a) $(-7, 0), (-4, -1), (-8, -3)$

b) $(1,3), (6,4), (2,1)$

19. Find the perimeter of the following shapes:



Exact:
Approximate:

Exact:
Approximate:

20. Find the perimeter of the polygon with these points: $(0, 7), (4, 4), (4, -3), (-4, -3), (-4, 4)$

Exact:
Approximate:

