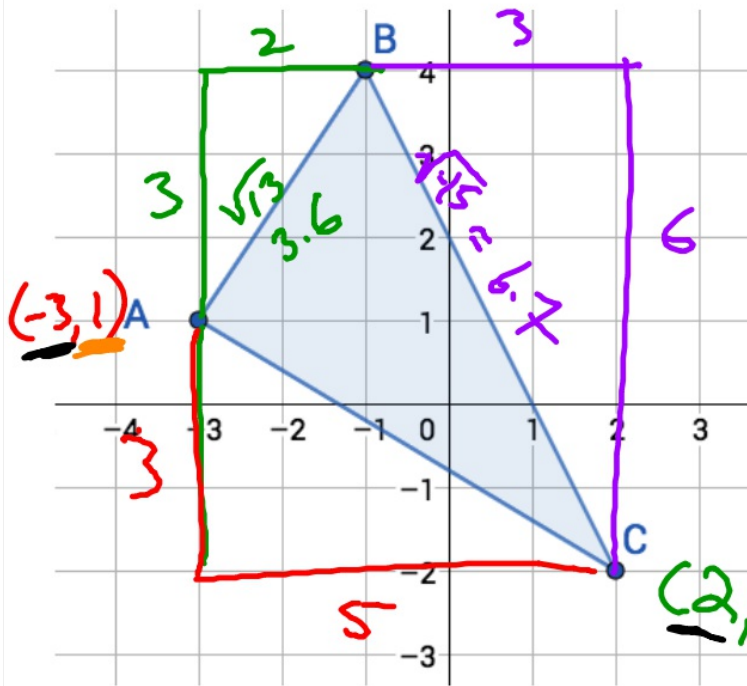


Good afternoon: attach warm up to notes, then answer #1-2.



1. To the nearest tenth, find the perimeter of $\triangle ABC$.

16.1

2. Find the coordinates of the midpoint of AC.

$(2, -2)$ $\left(\frac{-3+2}{2}, \frac{1+(-2)}{2} \right)$ $(-0.5, -0.5)$
 $\left(-\frac{1}{2}, -\frac{1}{2} \right)$

Reminders: tutoring today, 4-5p
retakes available in any DS except Weds.

Questions before assessment?



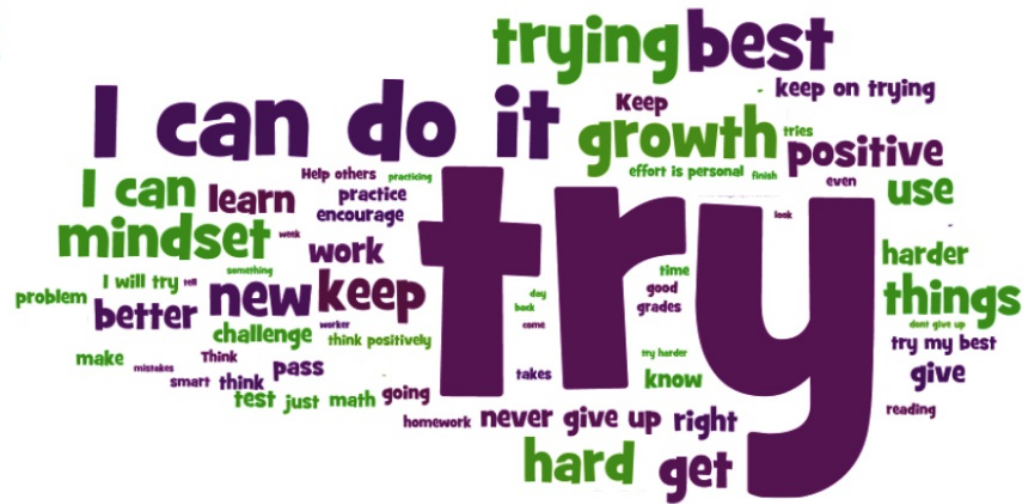
Clear desks except for coversheet, compass, ruler, calculator

- Be sure your name is on it
- Use cover sheet
- Show all work
- ***Finished?***

Complete self assessment and honor pledge, then:

turn it into basket by laptop and work on ACT prep until others finish. (Not for a grade, just practice)

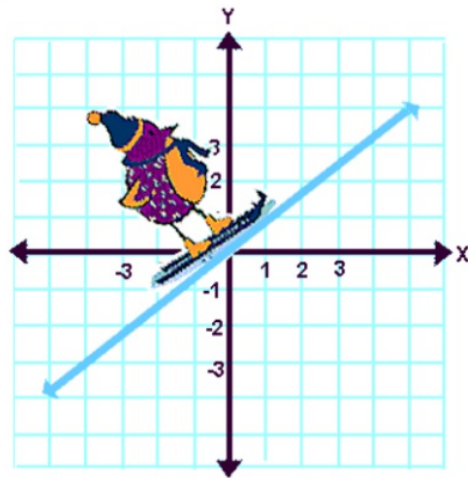
ACT prep key is taped to office door



NOTES

What does "slope" mean in mathematics?

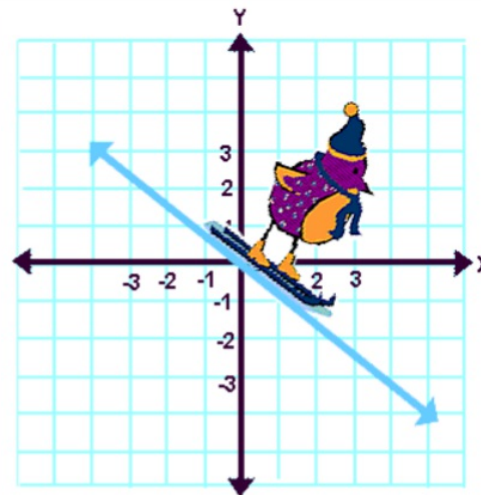
- rise over run
- positive \rightarrow uphill ; negative \rightarrow downhill
- zero: $\leftarrow \rightarrow$; undefined \updownarrow
- $y = mx + b$
- the slant of a line
- $$m = \frac{y_2 - y_1}{x_2 - x_1}$$



Positive Slope

Lines that have positive slope, slant "up hill" (as viewed from left to right).

Ski Bird has to work hard to make it up the hill. He needs to exert more positive (+) energy to get up the hill.

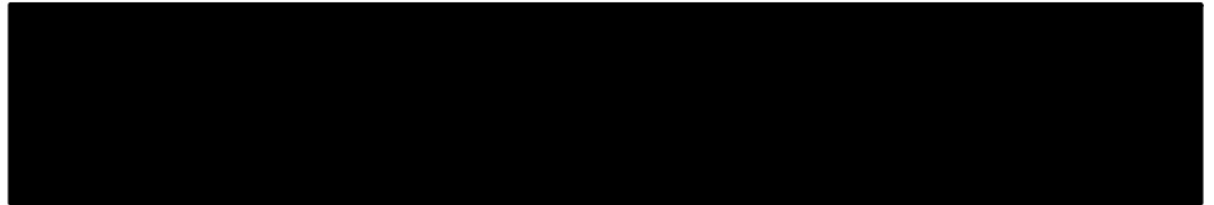


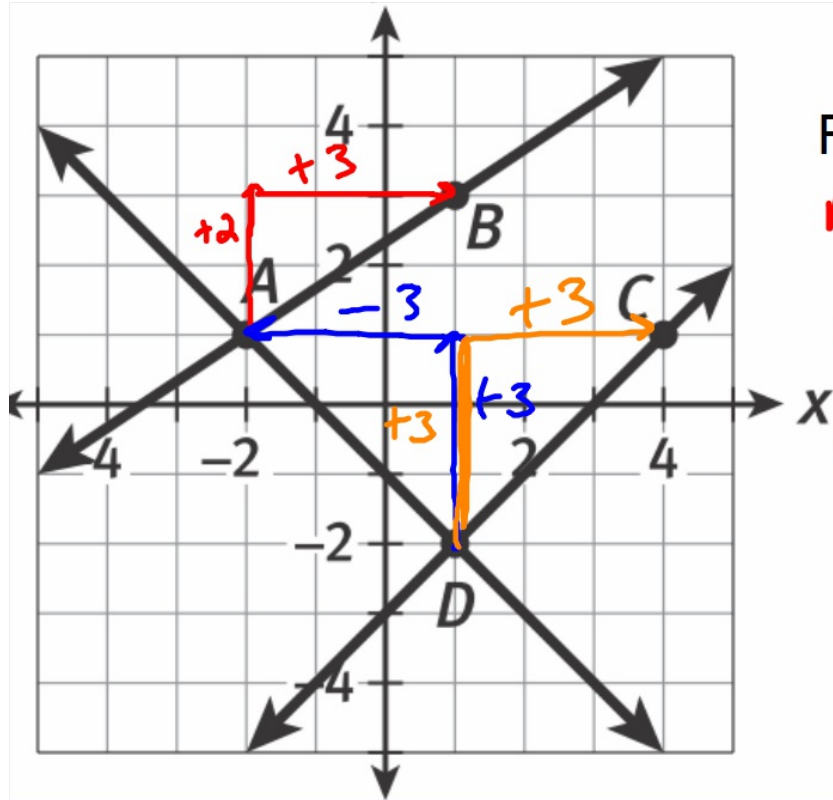
Negative Slope

Lines that have negative slope, slant "down hill" (as viewed from left to right).

Ski Bird enjoys the ride down the hill. He needs to decrease (-) energy to try to slow down.

Slope: the measure of how steep a line is
rise over run
vertical change over horizontal change





Find the slopes of lines \overleftrightarrow{AB} , \overleftrightarrow{AD} , and \overleftrightarrow{DC}

$$m_{ab} = \frac{2}{3} \quad m_{ad} = \frac{-3}{3} = -1 \quad m_{dc} = \frac{3}{3} = 1$$

Which lines (if any) are parallel?

No; No slopes are equal.

Which lines (if any) are perpendicular?

$\overleftrightarrow{AD} \perp \overleftrightarrow{DC}$; slopes are opposite*

write this down!!!!

Parallel lines have equal slopes

* Perpendicular lines have opposite reciprocal slopes

$$\frac{a}{b} \perp -\frac{b}{a}$$

ex/

$$-\frac{4}{3} \perp \frac{3}{4}$$

Slope Intercept Form (Algebra I)

$$y = mx + b$$

Slope, only when
 y is isolated.

Enter PIN into Egg

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$$y = \underline{3}x + 5$$

$$y = \underline{3}x - 2$$

- ✓ A parallel
- B perpendicular
- C neither
- D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$$y = \underline{3}x + 5$$

$$\cancel{3}y = \frac{9x-12}{\cancel{3} \quad \cancel{3}}$$

$$y = \underline{3}x - 4$$

✓ A parallel

B perpendicular

C neither

D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$$y = \frac{2}{2}x + 5$$

$$y = \frac{1}{2}x - 12$$

A parallel

B perpendicular

C neither

D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$$y = \frac{4}{1}x + 5$$

$$y = -\frac{1}{4}x - 12$$

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

A parallel

B perpendicular

C neither

D I don't know yet

Here are two linear equations. Are their lines parallel, perpendicular, or neither?

$$2x + 5y = 10$$

$$5x - 2y = 8$$

A parallel

→ B perpendicular

C neither

D I don't know yet

HW

p. 97 #2-14 (even)