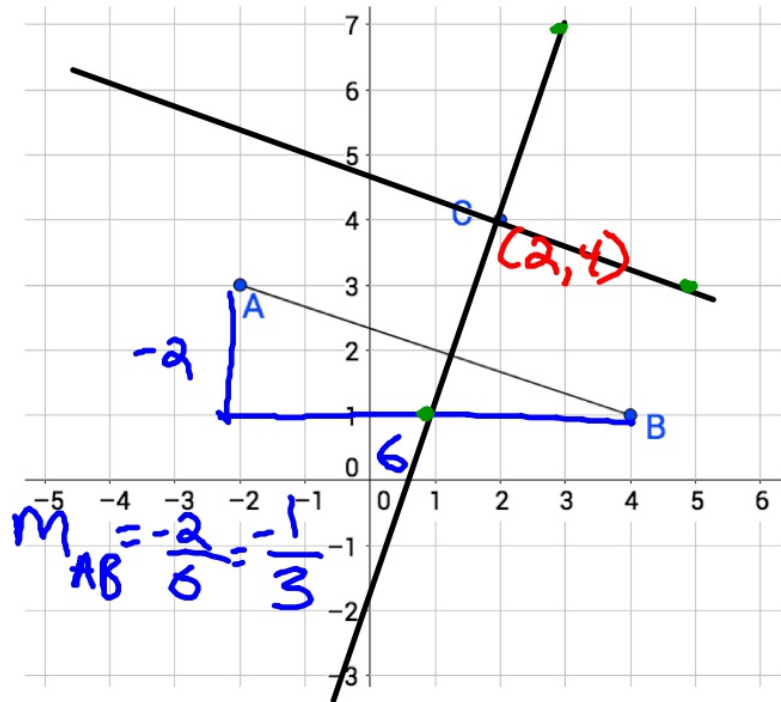


$y - y_1 = m(x - x_1)$ **YOU WILL NEED TEXTBOOK TODAY**

Good morning: Attach graph paper squares to notebooks, then:



1. Write the equation of the line through C, parallel to \overline{AB} . Draw this line. $m = -\frac{1}{3}$

$y - 4 = -\frac{1}{3}(x - 2)$

2. Write the equation of the line through C, perpendicular to \overline{AB} . Draw this line. $m = 3$

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

Assessment is being delayed to Monday

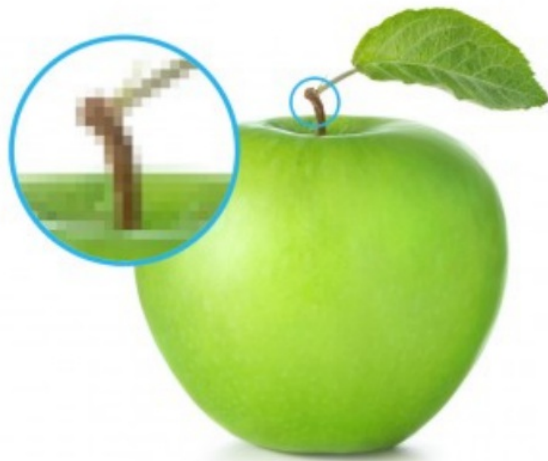
What to do until 9:55

- finish practice test if needed
- work on additional practice:
 - p. 93 #6-8; p.96 #16-19; p.59 #6, 15-17
(answers to these posted on office door)
- do a reassessment (must have aligned hw finished)



Vectors and Partitions

NOTES



bitmap images



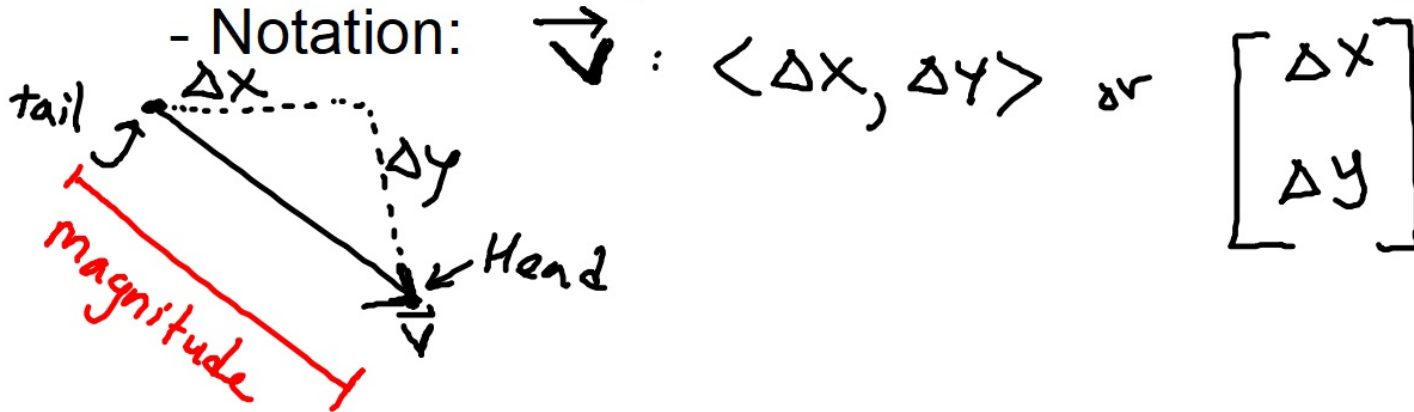
vector graphics

What is a vector?

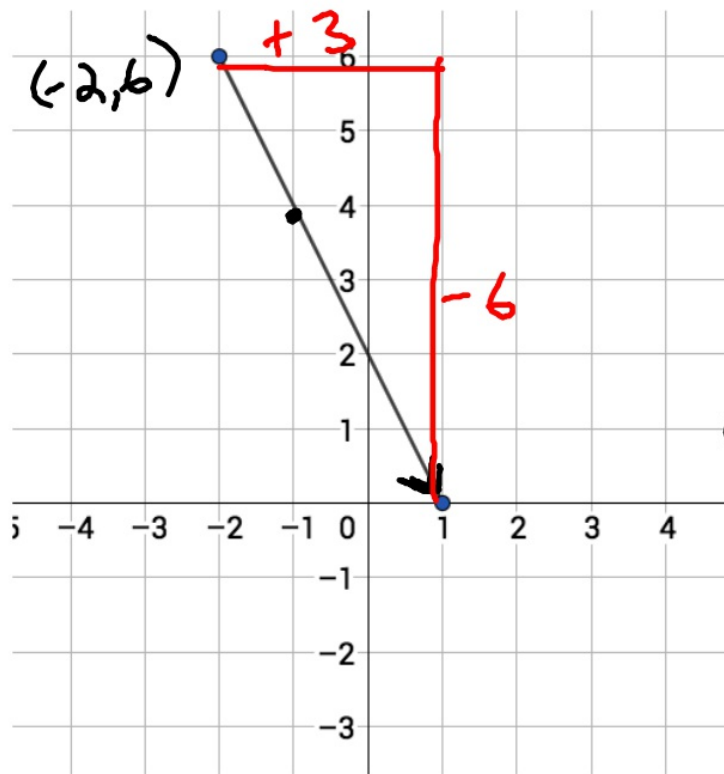
<https://www.youtube.com/watch?v=b01e0DIMb18>

A vector is a quantity with more than one element, often with 2 being magnitude and direction

- Valid in Euclidean and Cartesian space (blank and grid)
- Represented by an arrow/ "directed line segment"
- Notation:



Find the coordinates of the point along vector \vec{v} that is $\frac{1}{3}$ of the way from the tail to the head.



1. Find components of vector $\langle \Delta x, \Delta y \rangle$
2. Multiply each component by size of partition
3. Add result to (x, y) coordinates of starting point

① $\langle 3, -6 \rangle$

② $3 \times \frac{1}{3} = 1$

$-6 \cdot \frac{1}{3} = -2$

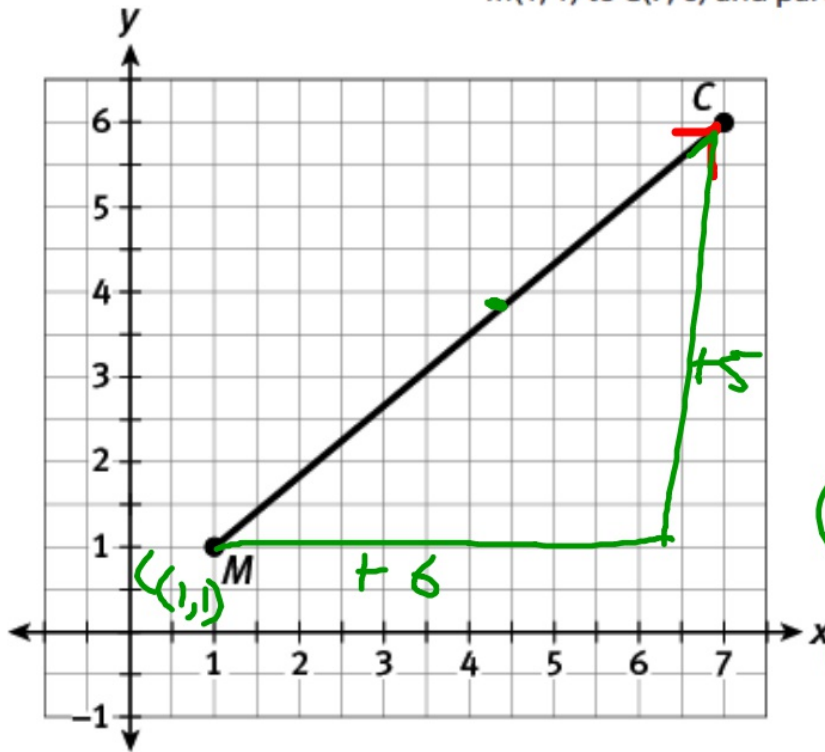
③ $(-2+1, 6-2)$

$(-1, 4)$

p. 388 Example A

Find the coordinates of point O that lies along the directed line segment from $M(1, 1)$ to $C(7, 6)$ and partitions the segment into the ratio 3 to 2.

$$3+2 \Rightarrow \underline{\underline{\frac{3}{5}}}$$



$$\langle 6, 5 \rangle$$

$$6 \cdot \frac{3}{5} = \frac{18}{5} = 3.6$$

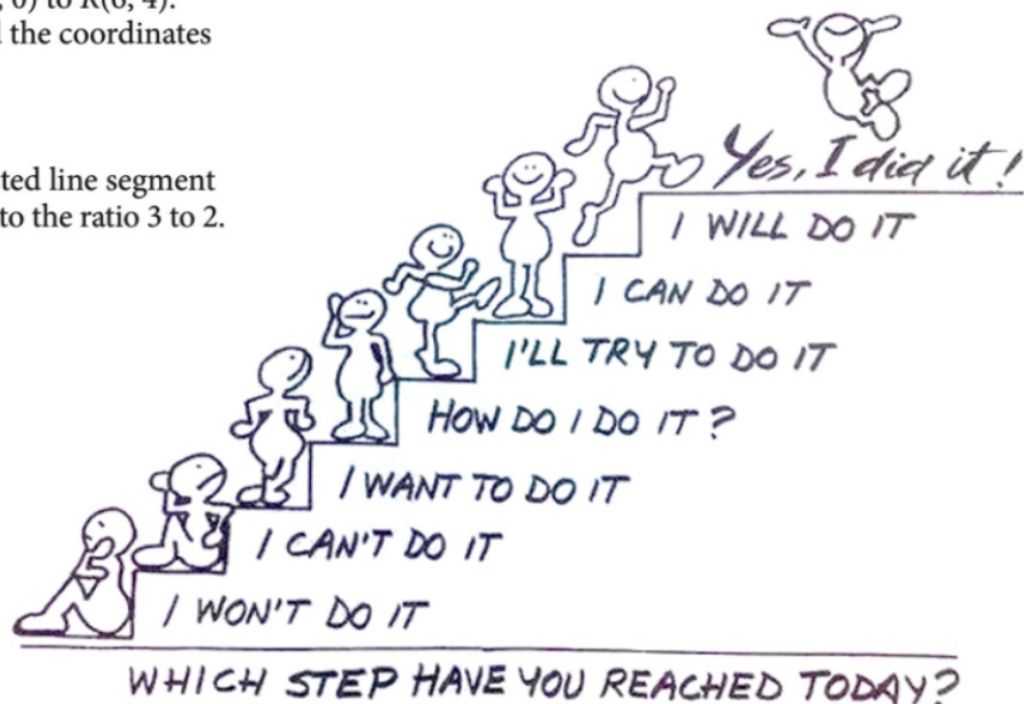
$$5 \cdot \frac{3}{5} = 3$$

$$(1 + 3.6, 1 + 3)$$

$$(4.6, 4)$$

p. 389 Try These A

- Find the coordinates of point T that lies $\frac{1}{2}$ of the way along the directed line segment from $B(2, 0)$ to $C(6, 4)$.
- Point S lies along the directed line segment from $A(2, 0)$ to $R(6, 4)$. Point S partitions the segment into the ratio 1:3. Find the coordinates of point S .
- Find the coordinates of point V that divides the directed line segment from $M(2, 4)$ to $C(5, 10)$ and partitions the segment into the ratio 3 to 2.



HW:

p. 389: #11,12

p. 390 #10,11

Assessment rescheduled to Monday

