

## QUIZ I REVIEW

\*slope formula is not  
on formula sheet!

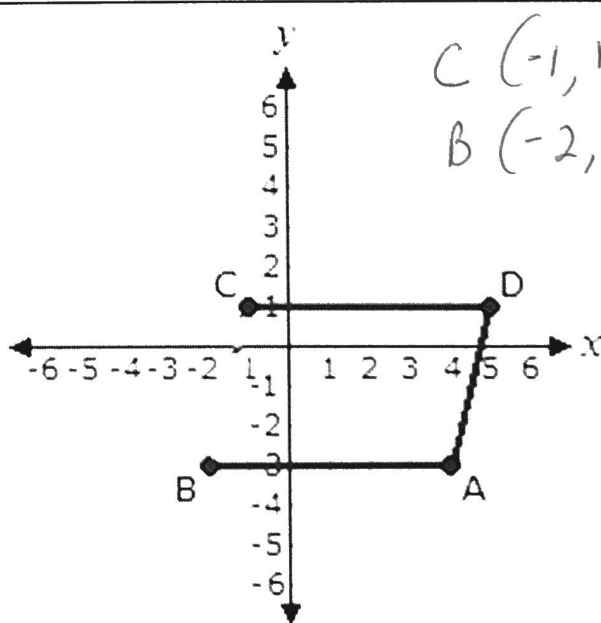
WHAT IS THE SLOPE  
OF THE MISSING  
SIDE THAT WOULD  
COMPLETE THE  
PARALLELOGRAM?

$$m = 4$$

$$\begin{aligned} \textcircled{1} \quad m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{-3 - 1}{-2 + 1} = \frac{-4}{-1} = 4 \end{aligned}$$

2 ways to solve:

$$\textcircled{2} \quad \frac{\text{rise}}{\text{run}} = \frac{+4}{+1} = 4$$

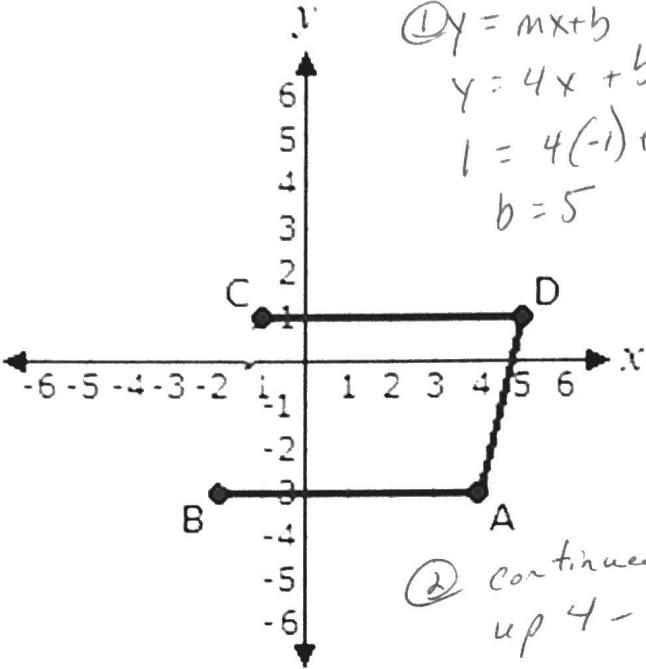


Solve 2 ways:

$y = mx + b$

WRITE THE EQUATION OF THE LINE THAT WOULD COMPLETE THE PARALLELOGRAM.

$y = 4x + 5$



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

② continued slope  
 up 4 - over 1

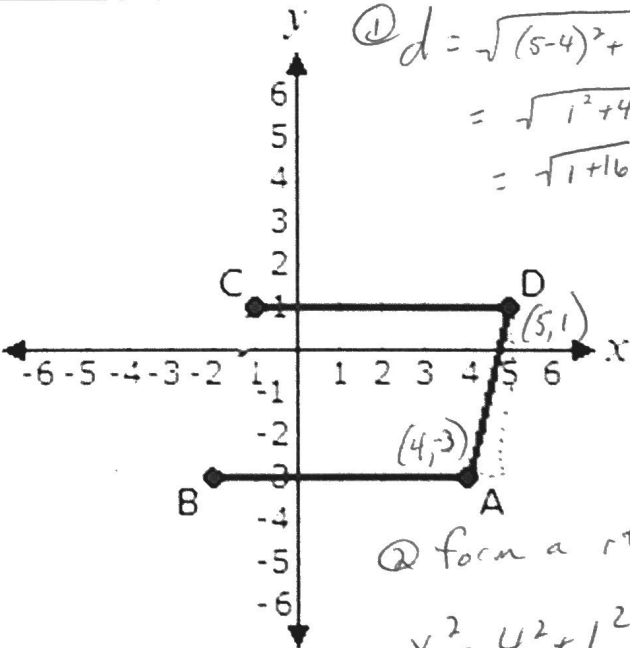
\* put in a point on the line (-1, 1)

Solve 2 ways:

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

WHAT IS THE LENGTH OF SEGMENT AD?

$\sqrt{17}$  units



①  $d = \sqrt{(5-4)^2 + (1+3)^2}$   
 $= \sqrt{1^2 + 4^2}$   
 $= \sqrt{1+16} = \sqrt{17}$

② form a rt.  $\Delta$   
 $x^2 = 4^2 + 1^2$   
 $x^2 = 17$   
 $x = \sqrt{17}$

$$m = \left( \frac{y_2 - y_1}{x_2 - x_1} \right) \quad m = \left( \frac{2-1}{10-8} \right) = \frac{1}{2} \quad m = \left( \frac{4-3}{-12+10} \right) = -\frac{1}{2}$$

A LINE THAT PASSES THROUGH (10,2) AND (8, 1) IS  
 \_\_\_\_\_ TO THE LINE THAT PASSES THROUGH  
 (-12, 4) AND (-10, 3).

- A. PARALLEL (slopes same)  
 B. PERPENDICULAR (slopes are opp. recip "flip + negate")  
 C. COINCIDENTAL (same slope and y-intercept)  
 D. NEITHER

$$\star m = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \star$$

FIND THE MISSING ENDPOINT OF THE  
 SEGMENT GIVEN THAT THE MIDPOINT (3, 5)  
 AND THE OTHER ENDPOINT IS AT (6, 10).

$$(3, 5) = \left( \frac{x+6}{2}, \frac{x+10}{2} \right)$$

$$3 = \frac{x+6}{2} \quad 5 = \frac{x+10}{2}$$

$$6 = x+6 \quad 10 = x+10$$

$$x = 0 \quad y = 0$$

$$(0, 0)$$

$$y = mx + b$$

WHAT IS THE EQUATION OF THE LINE  
PERPENDICULAR TO THE LINE  $Y = -5X + 2$   
AND GOES THROUGH  $(2, 10)$ ?

$$Y = \frac{1}{5}x + b$$

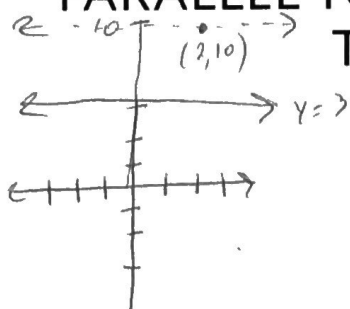
$$10 = \frac{1}{5}(2) + b$$

$$10 = \frac{2}{5} + b$$

$$9.6 = b$$

$$Y = \frac{1}{5}x + 9.6$$

WHAT IS THE EQUATION OF THE LINE  
PARALLEL TO THE LINE  $Y = 3$  AND GOES  
THROUGH  $(2, 10)$ ?



$$Y = 10$$

## PEMOAS

PARTITION SEGMENT BY THE  
GIVEN RATIO: A  $(-4, -6)$  & B  $(-2, 10)$ ; RATIO: 3:1

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

$$\left(-4 + \frac{3}{4}(-2 + 4), -6 + \frac{3}{4}(10 + 6)\right)$$

$$= \left(-4 + \frac{3}{4}(2), -6 + \frac{3}{4}(16)\right)$$

$$= (-4 + 1.5, -6 + 12)$$

$$= (-2.5, 6)$$

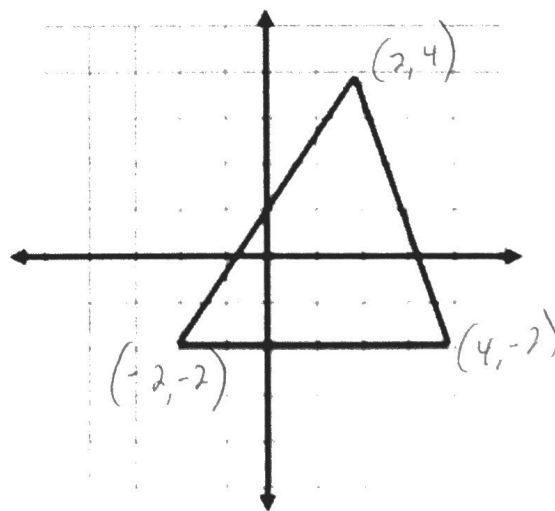
FIND THE AREA OF THIS  
SHAPE.

$$A = 18$$

FIND THE PERIMETER OF  
THIS SHAPE.

$$p \approx 19.54$$

$$p = 6 + 2\sqrt{13} + 2\sqrt{10}$$



Make triangles use pyth. theorem

$$6^2 + 4^2 = c^2$$

$$36 + 16 = c^2$$

$$= 2\sqrt{13}$$

$$6^2 + 2^2 = c^2$$

$$36 + 4 = c^2$$

$$40 = \del{2\sqrt{10}} 2\sqrt{10}$$

$$P = 6 + 2\sqrt{13} + 2\sqrt{10}$$

\* counting 6 for other side

$$a = \frac{1}{2}bh$$

$$= \frac{1}{2}(6)(6)$$

$$A = 18$$