

 $oldsymbol{1}$ . Identify the lines that are perpendicular  $oldsymbol{A}$  ?  $oldsymbol{1}$ 

Identify the lines that are parallel  $A \notin \mathcal{C}$ .

A) 
$$y = 2x + 3$$

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

C) 
$$y = 2x$$

A) 
$$y = 2x + 3$$
 B)  $y - 4 = \frac{1}{2}(x + 5)$  C)  $y = 2x$  D)  $y + 1 = -\frac{1}{2}(x + 7)$ 

2. Find the slope of each line. Then determine if the lines are parallel, perpendicular or neither.

$$M = \frac{4-3}{-1-2} = \frac{1}{-3}$$

$$m = \frac{-4 - (-1)}{4 - 3} = \frac{-3}{1} = -3$$

Parallel, perpendicular, or neither?



3. Find the slope of each line. Determine if the lines are parallel, perpendicular, or neither and explain your answer.

Line 1: 
$$y = \frac{1}{3}x + \frac{1}{3}$$

Line 2: 
$$y - \frac{1}{3} = 2 (x + 1)$$

Line 1: 
$$y = \frac{1}{3}x + 2$$
 Line 2:  $y - \frac{1}{3} = 2(x + 1)$  Parallel/Perpendicular/Neither?

 $M = \frac{1}{3}$ 

SLUPES ARE NETTHER THE SAME NOR OPPESITE

RECIPROCALS

4. Find the slopes of lines 1, 2, and 3. Then determine which lines are parallel or perpendicular to each other and explain your answer.

$$M = \frac{2-3}{0-3} = \frac{-1}{-2} = \frac{1}{2}$$

Line 2: 
$$y = -\frac{1}{2}x + 4$$

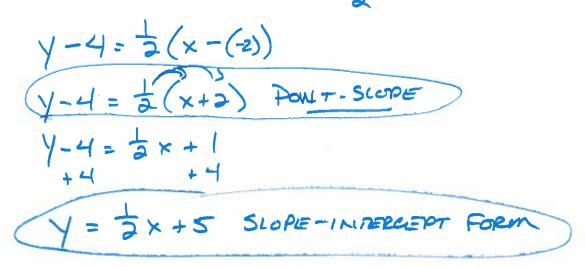
Line 3: 
$$y + 5 = \frac{1}{2}(x - 4)$$

LINES / AND 3 ARE PARALLEZ,

BELAUSE THEY HAVE THE SAME

NO PERDENDICULAR LINES

5. Determine the equation of the line that is parallel to the line  $y = \frac{1}{2}x - 3$  and passes through (-2, 4) in slope-intercept and point-slope form.



6. Determine the equation of the line that is perpendicular to the line y = 3x + 5 and passes through (6, 4) in slope-intercept and point-slope form.  $M = -\frac{1}{3}$ 

 $y-4=-\frac{1}{3}(x-6)$   $y-4=-\frac{1}{3}x+2$  +4 $y=-\frac{1}{3}x+6$ : Scope-Intercept

7. Give an equation of a line in slope-intercept form that is parallel to y = 4x + 3 y = 4x - 12 Give an equation of a line in slope-intercept form that is parallel to  $y = -\frac{1}{4}x - 1$   $y = -\frac{1}{4}x + 7$ 

If all 4 of the lines were graphed on the same coordinate plane, would they form a rectangle?

Why or why not? YES: (1) 2 PAIR OF OPPOSITE SIDES ARE PARALLEL, AND:

> 2) LINES WITH SLOPES OF 4 AND -4 ARE I (FORM RIGHT & COENERS)