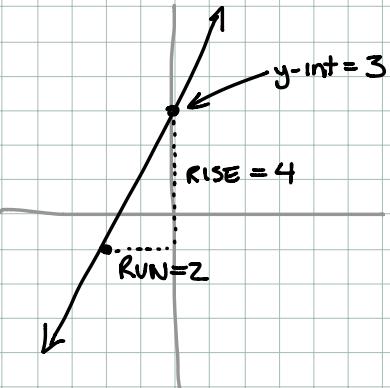


MATH JOURNAL

NAME: MR. NOTEN

UNIT 3: LINEAR RELATIONS

1) DETERMINE THE EQUATION OF A LINE FROM A GRAPH



- 1) FIND SLOPE USING $m = \frac{\text{RISE}}{\text{RUN}}$
- 2) FIND Y-INTERCEPT = b
- 3) PLUG $m \neq b$ into $y = mx + b$

2) DETERMINE THE EQUATION of A LINE GIVEN THE SLOPE & A POINT

GIVEN $m = 2$
point = $(4, 3)$

x	y	ROC
0	-5	-2
1	-3	-2
2	-1	-2
3	1	-2
4	3	-2

NEGATIVE SLOPE

- 1) CREATE A TABLE (SEE EXAMPLE)
- 2) ADD THE NEGATIVE SLOPE TO THE Y-VALUE
- 3) STOP WHEN THE X-VALUE IS 0
THIS IS b .
- 4) WRITE THE EQUATION

3) DETERMINE THE EQUATION of A LINE FROM 2 POINTS

POINTS $(-1, -3), (1, 5)$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - (-3)}{1 - (-1)} = \frac{8}{2} = 4$$

$$y = 4x + b$$

$$5 = 4(1) + b \leftarrow \text{PLUG IN } (1, 5)$$

$$b = 1$$

$$\therefore y = 4x + 1$$

1) CALCULATE THE SLOPE USING
 $m = \frac{y_2 - y_1}{x_2 - x_1}$

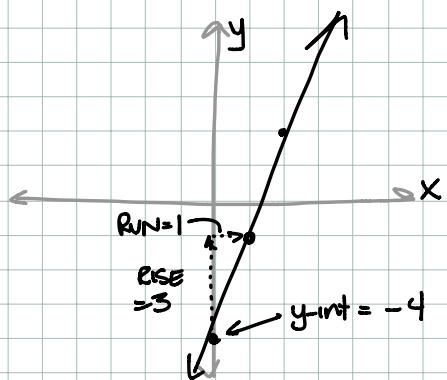
2) PLUG THE SLOPE & POINT INTO
 $y = mx + b$

3) SOLVE FOR b

4) WRITE THE EQUATION

4) GRAPH A LINE FROM AN EQUATION

$$y = 3x - 4$$



1) IDENTIFY THE $m \& b$ FROM THE EQUATION

2) PLOT THE y-intercept

3) PLOT THE NEXT POINT BY
STARTING AT THE y-INT
AND MOVING UP OR DOWN BY
THE RISE AND RIGHT BY THE
RUN

4) CONNECT THE POINTS WITH A
LINE