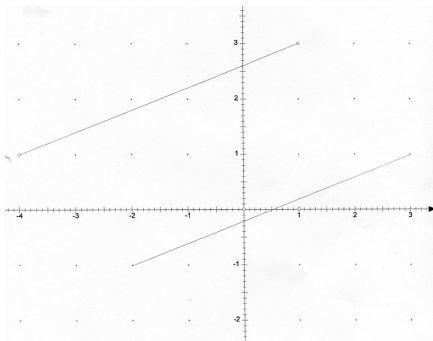


3.4 Slopes of Parallel Lines

Calculate the slope of each line

**Parallel Lines:** Lines that have the same slope

Mar 1-3:51 PM

Determine whether the quadrilateral with vertices A(1, 1) B(-2, 4) C(-3, 1) D(0, -2) is a parallelogram

$(0, -2) D$ $C (-3, 1)$
 $A (1, 1)$ $B (-2, 4)$

$$m_{AB} = \frac{4-1}{-2-1} = \frac{3}{-3} = -1$$

$$m_{DC} = \frac{1-(-2)}{-3-0} = \frac{3}{-3} = -1$$

$$m_{DA} = \frac{1-(-2)}{1-0} = \frac{3}{1} = 3$$

$$m_{BC} = \frac{4-1}{-2-(-3)} = \frac{3}{1} = 3$$

Yes it's a parallelogram because opposite sides have the same slope.

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The points M(5, 1) N(2, -2) and T(6, 7) are given. Determine the coordinates of a point P on the y-axis so that line segment MN is parallel to TP.

$T(6, 7)$ $P(0, y)$ $M(5, 1)$ $N(2, -2)$
 x_1, y_1 x_2, y_2
 $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $m_{MN} = \frac{-2 - 1}{2 - 5} = \frac{-3}{-3} = 1$
 $m = 1$
 $1 = \frac{y - 7}{0 - 6}$
 $1 = \frac{y - 7}{-6}$
 $-6 = y - 7 + 7$
 $1 = y$
 $P(0, 1)$

Mar 3-11:19 AM

Assignment: Pg. 177

1, 3a, 7, 9, 13

Mar 1-3:58 PM