Independent Practice

Determine whether the two lines below are parallel, perpendicular, or skew. Justify your reasoning

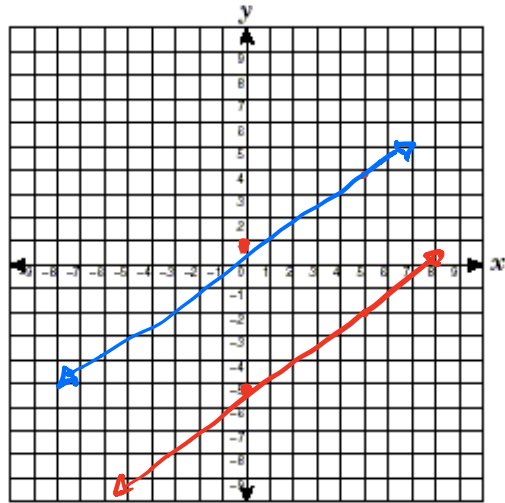$y = \frac{4}{5}x - 5$ $m_1 = \underline{4/5}$

$y = \frac{4}{5}x + 1$ $m_2 = \underline{4/5}$

Conclusion

$\parallel$ b/c slopes are the same

Determine whether the two lines below are parallel, perpendicular, or skew. Justify your reasoning
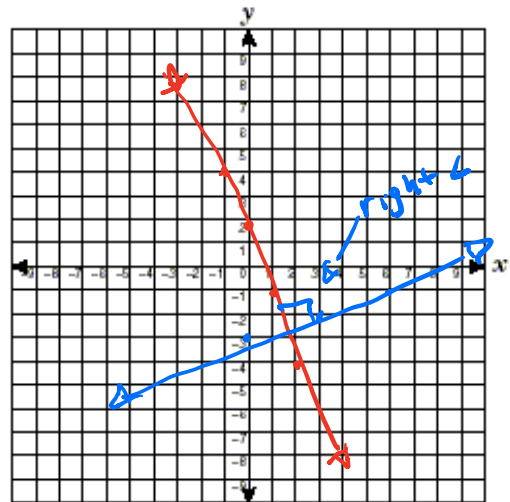
$y = -3x + 2$ $m_1 = \underline{-3/1}$

$y = \frac{1}{3}x - 3$ $m_2 = \underline{1/3}$

Conclusion

$\perp$ b/c slopes are negative reciprocals

Determine whether the two lines below are parallel, perpendicular, or skew. Graph each line and justify your reasoning
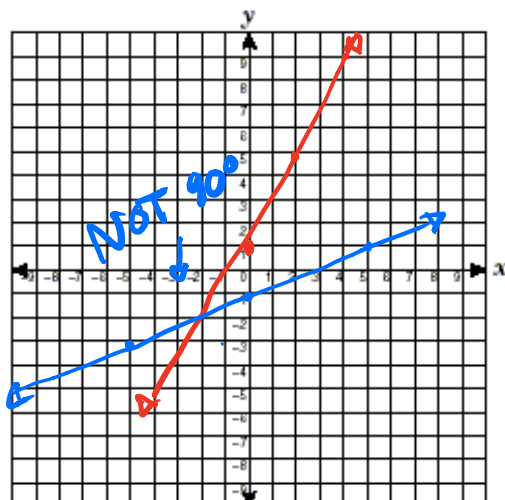
$y = \frac{5}{2}x + 1$ $m_1 = \underline{5/2}$

$y = \frac{2}{5}x - 1$ $m_2 = \underline{2/5}$

Conclusion

Skew b/c slopes are neither $\parallel$ or $\perp$

What is the slope of a line perpendicular to the line whose equation is $y = 3x + 4$?

1) $\frac{1}{3}$

2) $-\frac{1}{3}$

3) 3

4) -3

What is the slope of a line perpendicular to the line whose equation is $y = -\frac{2}{3}x - 5$?

1) $-\frac{3}{2}$

2) $-\frac{2}{3}$

3) $\frac{2}{3}$

4) $\frac{3}{2}$

The graphs of the lines represented by the equations $y = \frac{1}{3}x + 7$ and $y = -\frac{1}{3}x - 2$ are

1) parallel
2) horizontal
3) perpendicular
4) intersecting, but not perpendicular

Points A(-5,3) and B(7,6) lie on AB. Points C(5,4) and D(9,5) lie on CD. Determine if AB and CD are parallel, perpendicular, or skew.

$$m_1 = -\frac{1}{4}$$

$$m_2 = \frac{1}{4}$$

skew

Determine whether the two lines represented by the equations $y = 2x + 3$ and $2y + x = 6$ are parallel, perpendicular, or neither. Justify your response.

Perpendicular

Two lines are represented by the equations $x + 2y = 4$ and $4y - 2x = 12$. Determine whether these lines are parallel, perpendicular, or neither. Justify your answer.

Neither

The equations of lines k, m, and n are given below.

$$k: 3y + 6 = 2x$$
$$m: 3y + 2x + 6 = 0$$
$$n: 2y = 3x + 6$$

Which statement is true?

1) $k \parallel m$
2) $n \parallel m$
3) $m \perp k$
4) $m \perp n$

Show all work below!