

Warm Up Questions

1. A line passes through points (3, 4) and (8 + k, 3). If the slope of the line is perpendicular to $y = 2x + 8$, find k.
2. A line has an x-int of 4 and passes through (4, k - 8) and is perpendicular to the y-axis.
3. A line passes through (k, 9) and the origin. If the slope is parallel to $y = 9/5x + 2$, find k.

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1. A line passes through points (3, 4) and (8 + k, 3). If the slope of the line is perpendicular to $y = 2x + 8$, find k.

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

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2. A line has an x-int of 4 and passes through (4, k - 8) and is perpendicular to the y-axis.

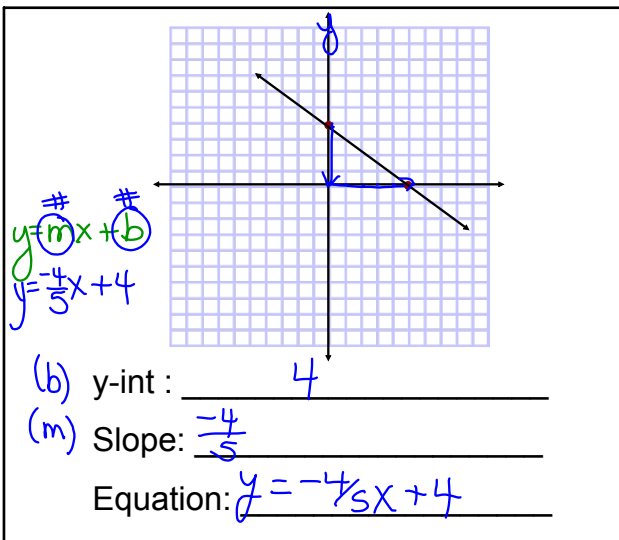
$x\text{-int} = 4$
 $(4, 0) (4, k-8) \quad m = \frac{0}{1}$
 $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $\frac{0}{1} = \frac{(k-8) - 0}{4 - 4}$
 $\frac{0}{1} = \frac{k-8-0}{0}$
 $0 = k-8$
 $k = 8$

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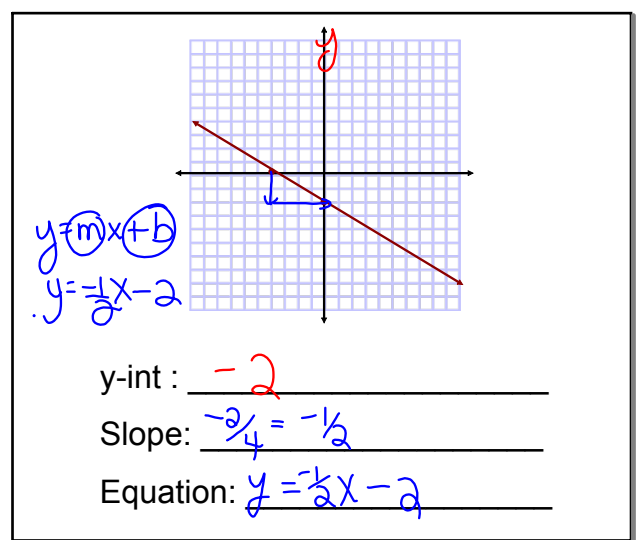
3. A line passes through (k, 9) and the origin. If the slope is parallel to $y = 9/5x + 2$, find k.

$(k, 9) (0, 0) \quad m = 9/5$
 $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $\frac{9}{k} = \frac{9 - 0}{0 - k}$
 $\frac{9}{k} = \frac{-9}{-k}$
 $9k = -9(-k)$
 $9k = 9k$
 $k = 5$

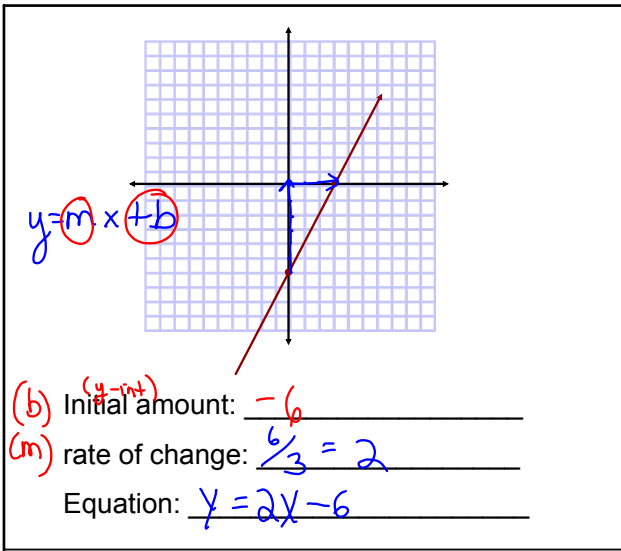
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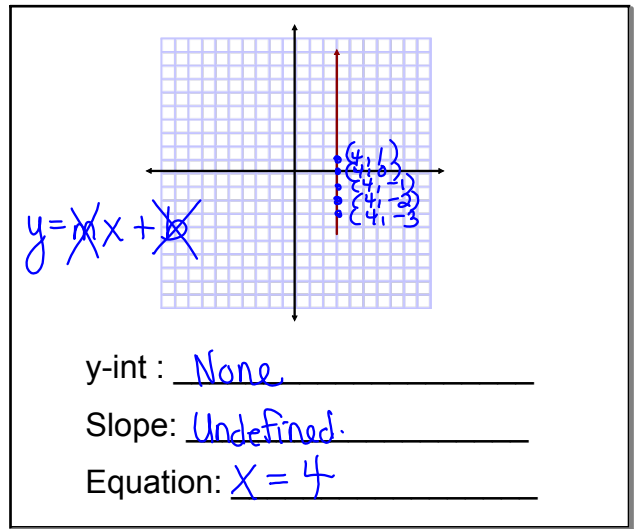
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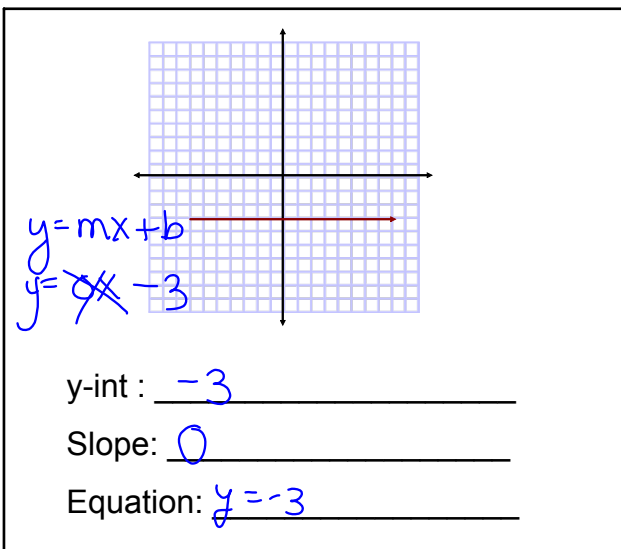
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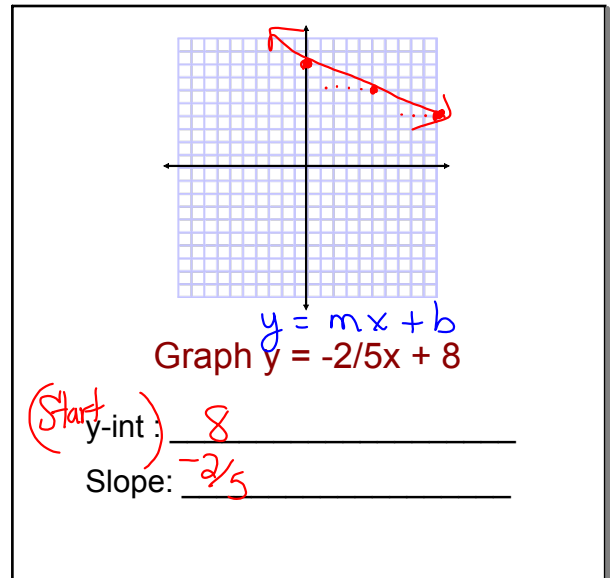
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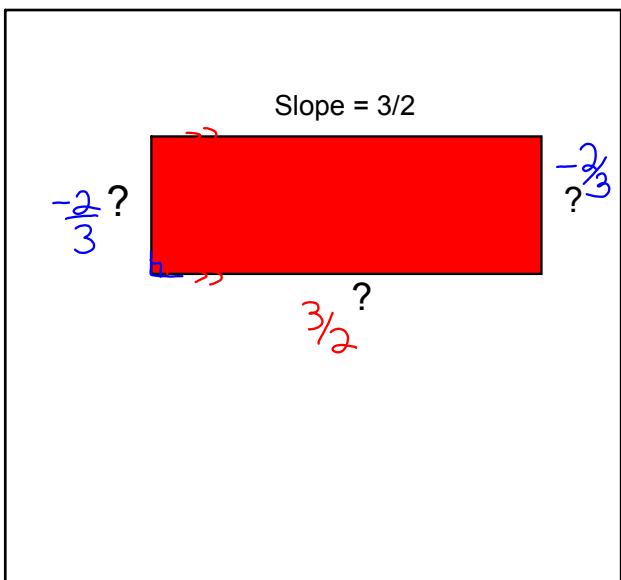
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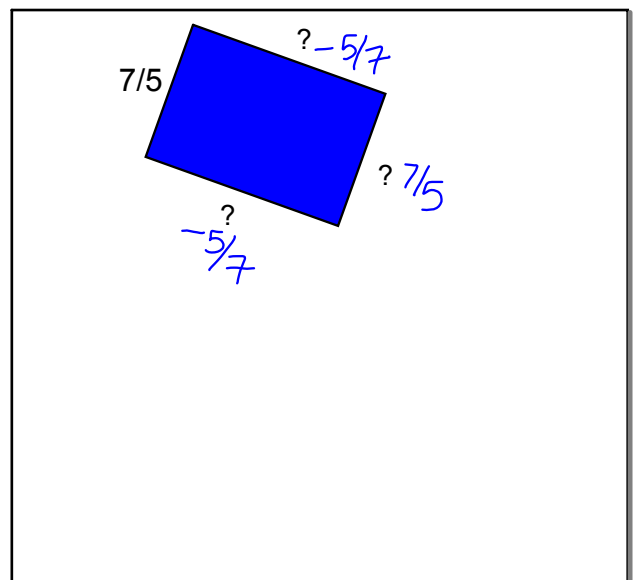
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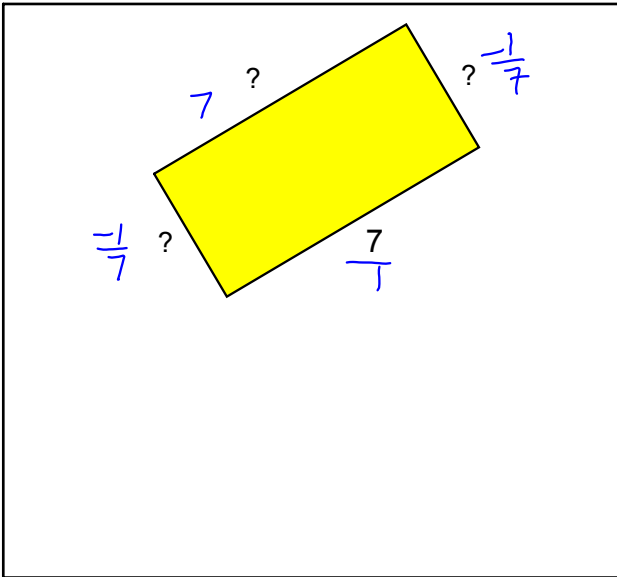
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Calculate the slope that is ~~parallel~~ ^{same slope} to $y = 8x + 2$?

$m = 8$

Slope : 8

Answer: 8

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Calculate the slope that is ~~perpendicular~~ ^{opp rec slope} to $y = 3/7 x - 2$?

Slope : 3/7

Answer: -7/3

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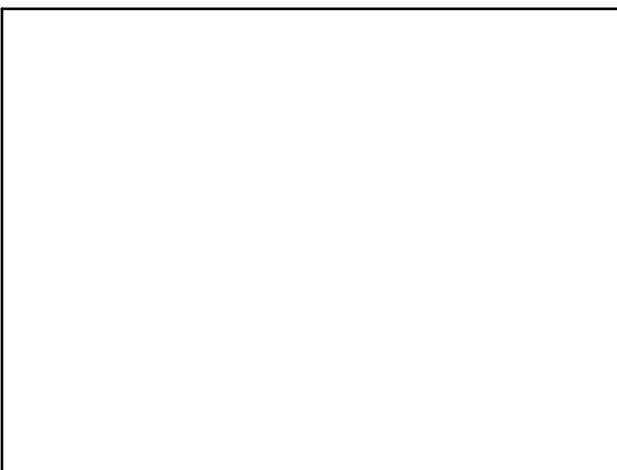
Calculate the slope that is ~~parallel~~ ^{same slope} to $y = 5$?

$y = 0x + 5$

Slope : 0

Answer: 0

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