$(4, 5)$
$x \quad y_1$

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

① Slope
② Point
③ xy

$\frac{1}{3}x^2 + \frac{2}{3}x^3$
$\frac{2}{6} + \frac{6}{6}$

$y - y_1 = m(x - x_1)$

$\pm ax \pm by + c = 0$

$y - 5 = \frac{1}{3}(x - 4)$

$3y - 15 = 3(x - 4)$
$3 \quad 3$
$1y - 5 = 1(x - 4)$
$1y - 5 = 1x - 4$
$-1x + y - 5 + 4 = 0$
$-x + y - 1 = 0$
$+x \quad -y + 1 = 0$

5) $(6,7)\ (5k,9)$ $\quad x_1\ y_1\ \quad x_2\ y_2$

perp to 5/6.

$-\frac{6}{5}$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$-\frac{6}{5} = \frac{9-7}{5k-6}$

$-6(5k-6) = 5(9-7)$

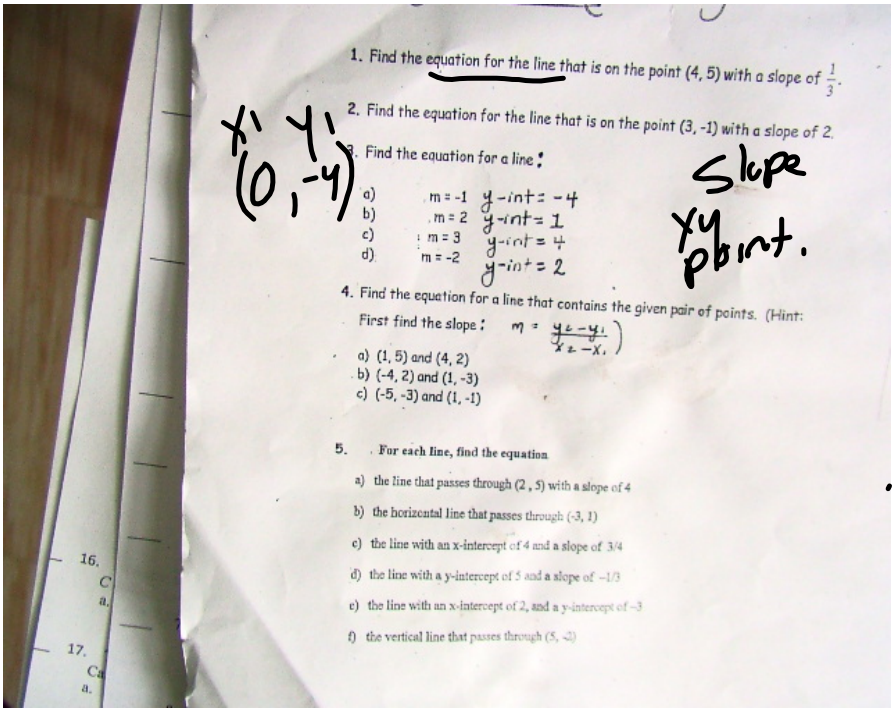
$-30k + 36 = 5(2)$

$-30k + 36 = 10$

$-30k = 10 - 36$

$\frac{-30k}{-30} = \frac{-26}{-30}$

$k = \frac{13}{15}$



1. Find the equation for the line that is on the point (4, 5) with a slope of $\frac{1}{3}$.

2. Find the equation for the line that is on the point (3, -1) with a slope of 2.

3. Find the equation for a line:

a) m = -1 y-int = -4
b) m = 2 y-int = 1
c) m = 3 y-int = 4
d) m = -2 y-int = 2

4. Find the equation for a line that contains the given pair of points. (Hint: First find the slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$)

a) (1, 5) and (4, 2)
b) (-4, 2) and (1, -3)
c) (-5, -3) and (1, -1)

5. For each line, find the equation.

a) the line that passes through (2 , 5) with a slope of 4
b) the horizontal line that passes through (-3, 1)
c) the line with an x-intercept of 4 and a slope of 3/4
d) the line with a y-intercept of 5 and a slope of −1/3
e) the line with an x-intercept of 2, and a y-intercept of −3
f) the vertical line that passes through (5, -2)

16.
a.

17.
a.

$(0, -4)$ x_1 y_1

slope
xy point.

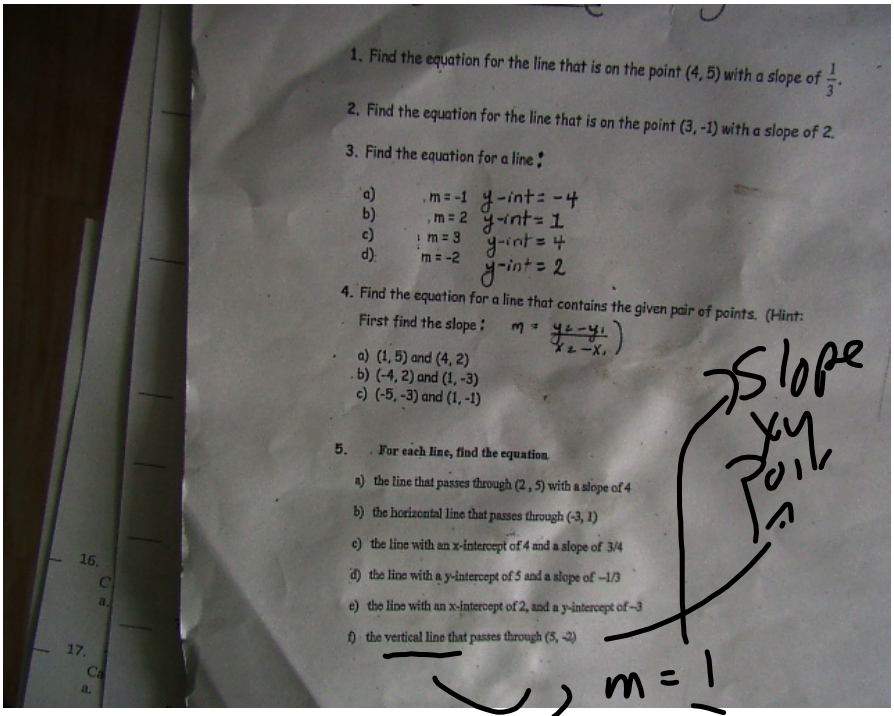
3a) $y - y_1 = m(x - x_1)$

$y - (-4) = -4(x - 0)$

$y + 4 = -4x$

$ax + by + c = 0$

$+4x + y + 4 = 0$



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5f

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$y - y_1 = m(x - x_1)$

$y + 2 = \frac{1}{0}(x - 5)$

$0 = x - 5$

slope

$m = \frac{1}{0}$

x int 2
(2, 0)
x_1, y_1

y int -3
(0, -3)
x_2, y_2

$m = \frac{y^2 - y^1}{x^2 - x^1}$

$y - y_1 = m(x - x_1)$