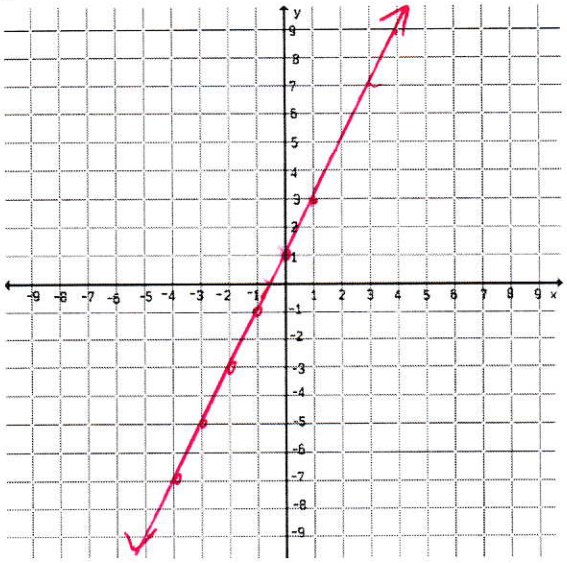
Name Answers Date

3.8 – Graphing Lines

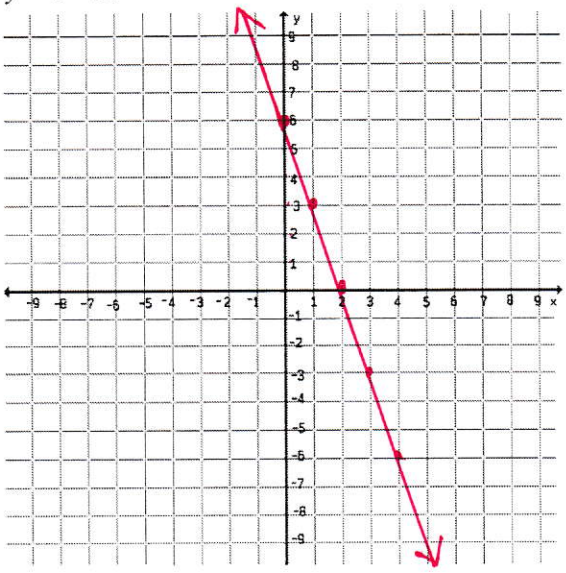
Graph the following lines:

1) $y = 2x + 1$

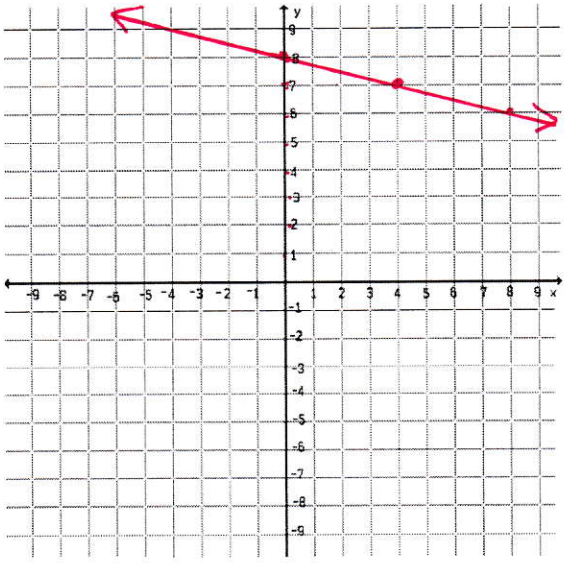


2) $y = 6 - 3x$

$y = -3x + 6$



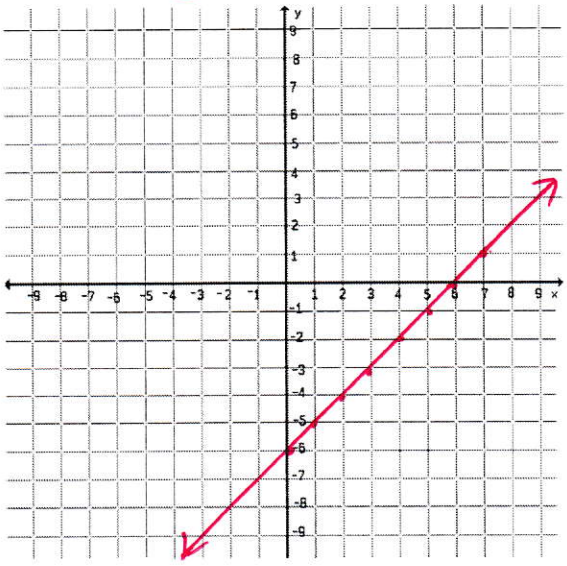
3) $y = -\frac{1}{4}x + 8$



4) $x - y = 6$

$-y = -x + 6$

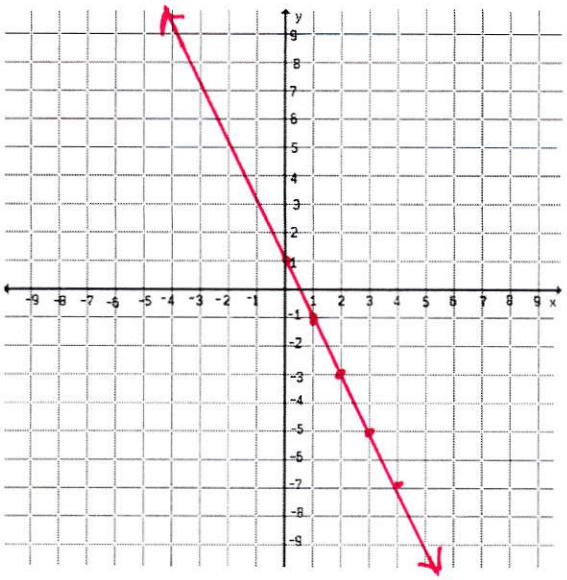
$y = x - 6$



5) $y+3=-2(x-2)$

$m=-2$

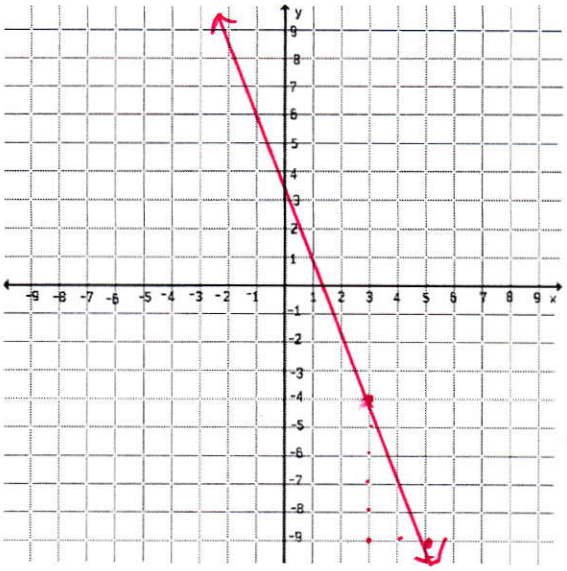
$(2,-3)$



6) $y+4=-\frac{5}{2}(x-3)$

$m=-\frac{5}{2}$

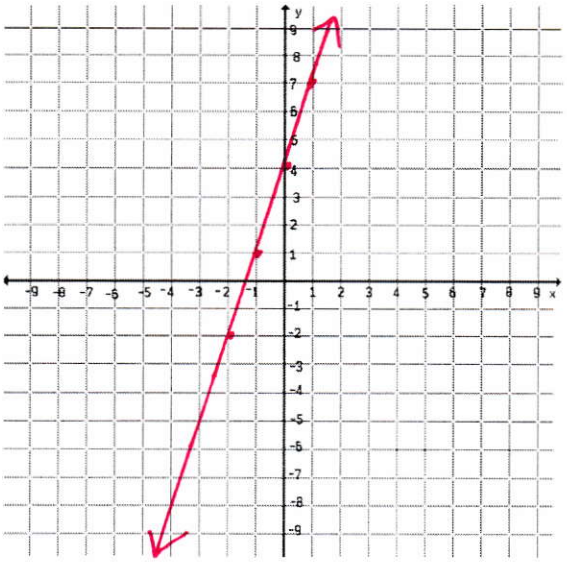
$(3,-4)$



7) $9x-3y=-12$

$-3y=-9x-12$

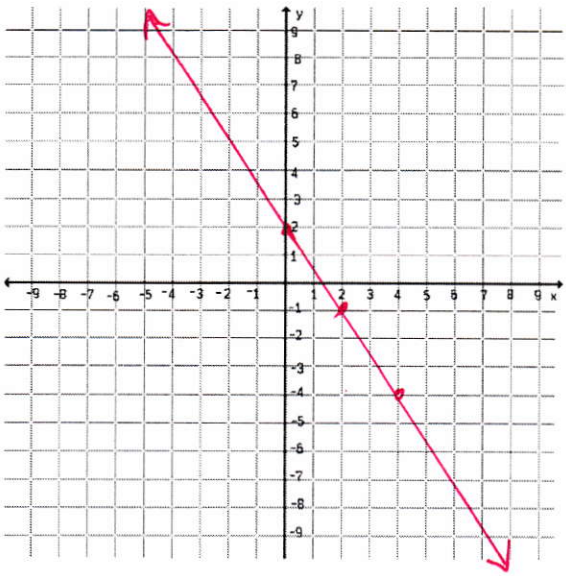
$y=3x+4$



8) $3x+2y=4$

$2y=-3x+4$

$y=-\frac{3}{2}x+2$



Write an equation in point-slope **and** standard form of the line that passes through the given points.

9) (7,2) and (2,12)

$m=\frac{12-2}{2-7}=\frac{10}{-5}=-2$

$y-2=-2(x-7)$ or $y-12=-2(x-2)$ $\rightarrow y-2=-2x+14$

$2x+y=16$

10) (6,-2) and (12,1)

$m=\frac{1--2}{12-6}=\frac{3}{6}=\frac{1}{2}$

$y+2=\frac{1}{2}(x-6)$ or $y-1=\frac{1}{2}(x-12)$ $\rightarrow y+2=\frac{1}{2}x-3$

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

$x-2y=10$

With the assistance of the DESMOS app, find the intersection(s) of the following figures:

11) $y = -x + 2$
$y = 2x + 5$

(-1, 3)

12) $4x + y = -3$
$5x - y = -6$

(-1, 1)

13) $y = x^2$
$y = 8 - x^2$

(-2, 4) and (2, 4)

14) $y = x^2 - 2x$
$y = -x^2 + 6x - 6$

(1, -1) and (3, 3)