Name: Homework
Date: _____

Linear Functions Review - 01:
Review from Grade 9

1. Put the following equations into "y = ax + b" form.

a) $3x + 6y = 27$

$y = -0.5x + 4.5$

$3x + 6y = 27$
$-3x \quad -3x$
$\frac{6y}{6} = \frac{-3x}{6} + \frac{27}{6}$
$y = -0.5x + 4.5$

b) $\frac{1}{2}x - 2.5y = -20$

$y = 0.2x + 8$

$\frac{1}{2}x - 2.5y = -20$
$0.5x - 2.5y = -20$
$-0.5x \quad -0.5x$
$\frac{-2.5y}{-2.5} = \frac{-0.5x}{-2.5} - \frac{20}{-2.5}$
$y = 0.2x + 8$

c) $x = 4y - 48$

$y = 0.25x + 12$

$x = 4y - 48$
$+48 \quad +48$
$x + 48 = 4y$
$\frac{}{4} \quad \frac{}{4} \quad \frac{}{4}$
$0.25x + 12 = y$

d) $0 = 16x - 5y + 8$

$y = 3.2x + 1.6$

$0 = 16x - 5y + 8$
$+5y \quad +5y$
$\frac{5y}{5} = \frac{16x + 8}{5}$
$y = 3.2x + 1.6$

e) $-2y = 6 - 16x$

$y = 8x - 3$

$\frac{-2y}{-2} = \frac{6 - 16x}{-2}$
$y = -3 + 8x$

f) $3y = 12$

$y = 4$

$\frac{3y}{3} = \frac{12}{3}$
$y = 4$

g) $2 = 4x$

$x = 0.5$

$\frac{2}{4} = \frac{4x}{4}$
$0.5 = x$

2. For each of the equations in question 1, give the x-intercept and the y-intercept and sketch the graph.

a) Equation: $y = 0.5x + 4.5$

x-intercept: $-9, 0$

y-intercept: $0, 4.5$

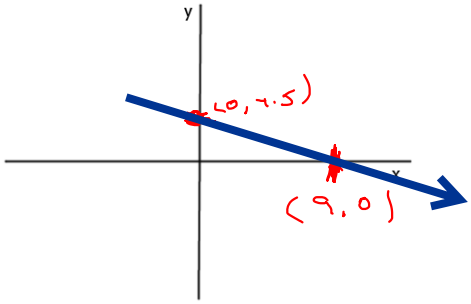
x-int $y = 0$

$y = 0.5x + 4.5$

$-4.5 \quad -4.5$

$\frac{-4.5}{0.5} = \frac{0.5x}{0.5}$

$-9 = x$



b) Equation: $y = 0.2x + 8$

x-intercept: $-40, 0$

y-intercept: $0, 8$

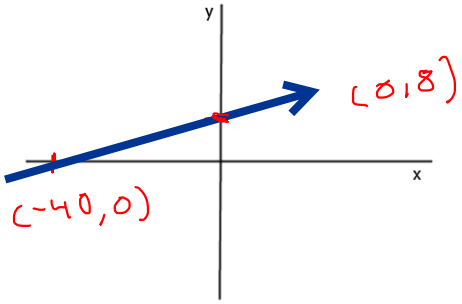
x-int $y = 0$

$y = 0.2x + 8$

$-8 \quad -8$

$\frac{-8}{0.2} = \frac{0.2x}{0.2}$

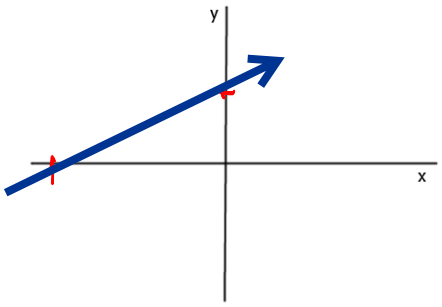
$-40 = x$



c) Equation: $y = 0.25x + 12$

x-intercept: $-48, 0$

y-intercept: $0, 12$



x int $y = 0$

$y = 0.25x + 12$

$-12 \quad -12$

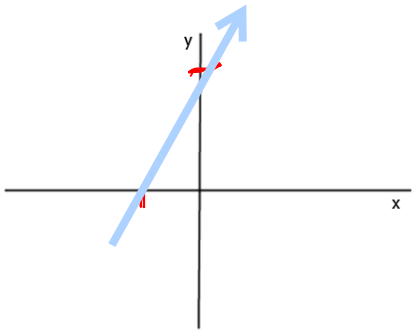
$\frac{-12}{0.25} = \frac{0.25x}{0.25}$

$-48 = x$

d) Equation: $y = 3.2x + 1.6$

x-intercept: $(-0.5, 0)$

y-intercept: $(0, 1.6)$



x int $y = 0$

$y = 3.2x + 1.6$

$-1.6 \quad -1.6$

$\frac{-1.6}{3.2} = \frac{3.2x}{3.2}$

$-0.5 = x$

x int y: 0

e) Equation: $y = 8x - 3$

x-intercept: 0.375, 0

y-intercept: 0, -3

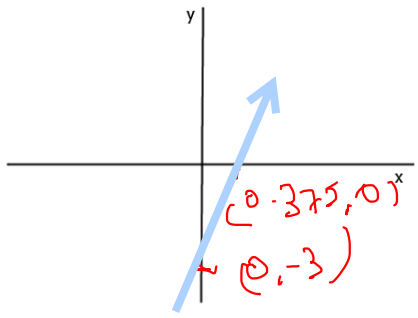
$y = 8x - 3$

$0 = 8x - 3$

$+3 \quad +3$

$\frac{3}{8} = \frac{8x}{8}$

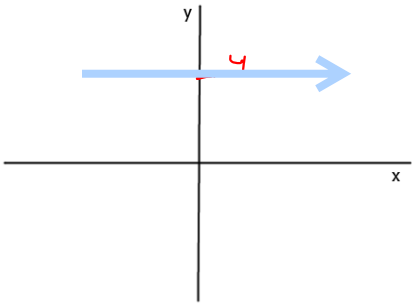
$x = 0.375$



f) Equation: $y = 4$

x-intercept:

y-intercept:



g) Equation: $x = 0.5$

x-intercept:

y-intercept: