Graphing Linear Functions/Equations using Intercepts

An intercept is the point where the line crosses the x-axis or y-axis.

X-intercept

- where the line crosses the x-axis; (x , 0)
- to find, substitute zero for y and solve the equation

Y-intercept

- where the line crosses the y-axis; (0 , y)
- to find, substitute zero for x and solve the equation

To Graph using Intercepts

- Find the x-intercept by setting y=0.
- Find the y-intercept by setting x=0.
- Plot both points and connect with a straight edge; add arrows to the end of the line.

Find the intercepts and graph the equation.

1) $4x + 3y = 12$

$4x + 3(0) = 12$

$4x = 12$

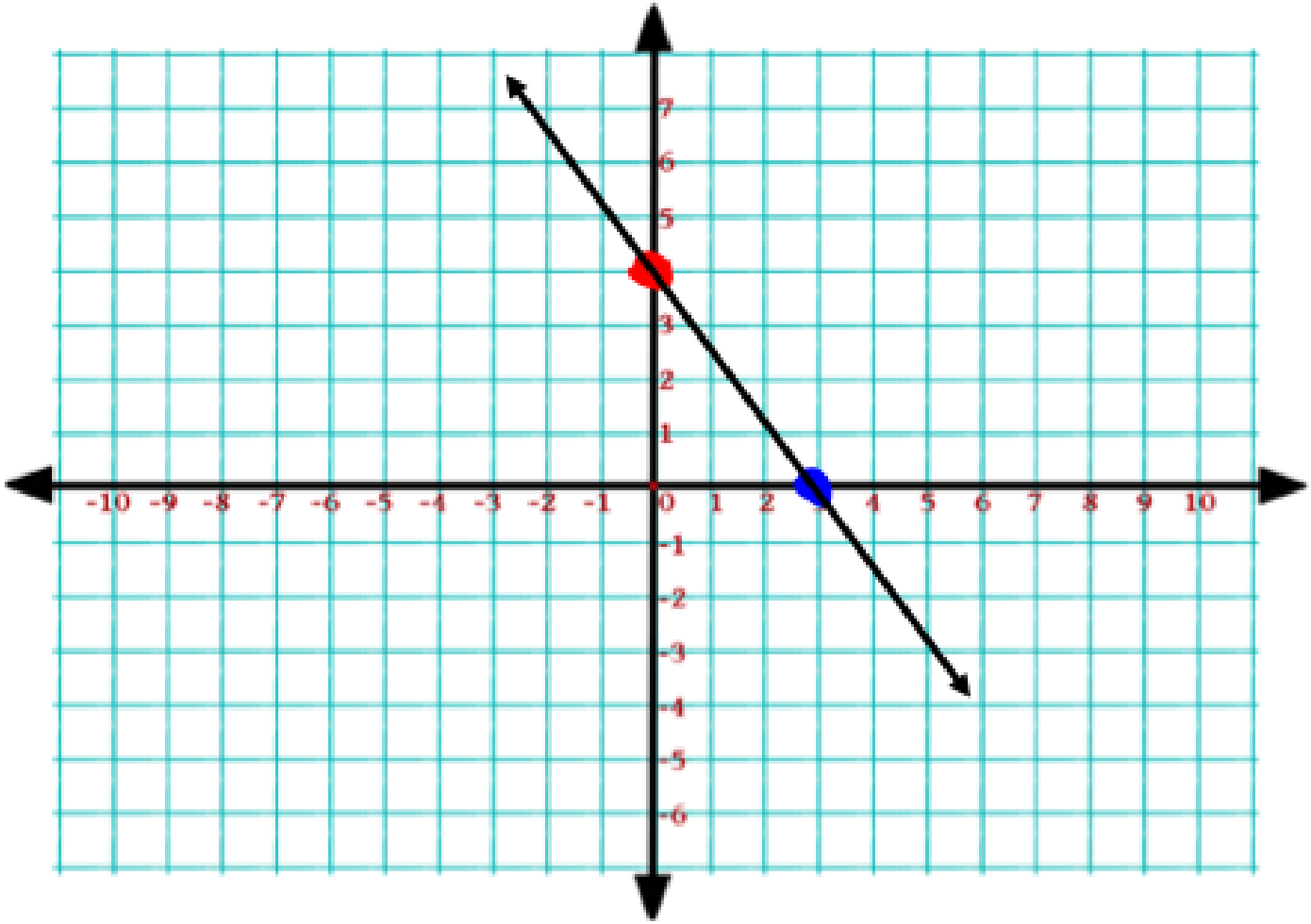
$x = 3$

$4(0) + 3y = 12$

$3y = 12$

$y = 4$

x	y
3	0
0	4



Find the intercepts and graph the equation.

2) $y = -2x - 8$

$0 = -2x - 8$

$+8 \quad +8$

$8 = -2x$

$-4 = x$

$y = -2(0) - 8$

$y = 0 - 8$

$y = -8$

x	y
-4	0
0	-8