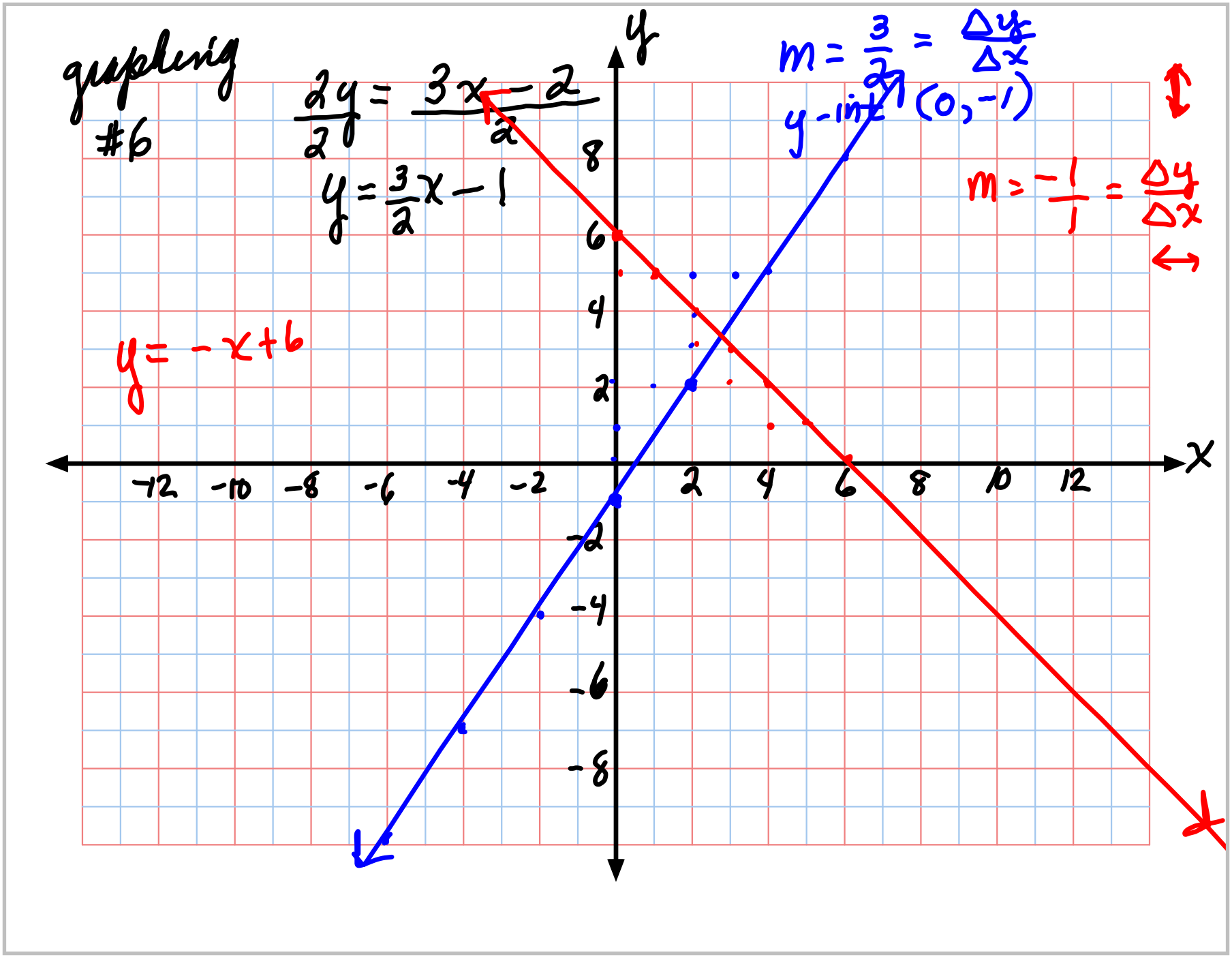
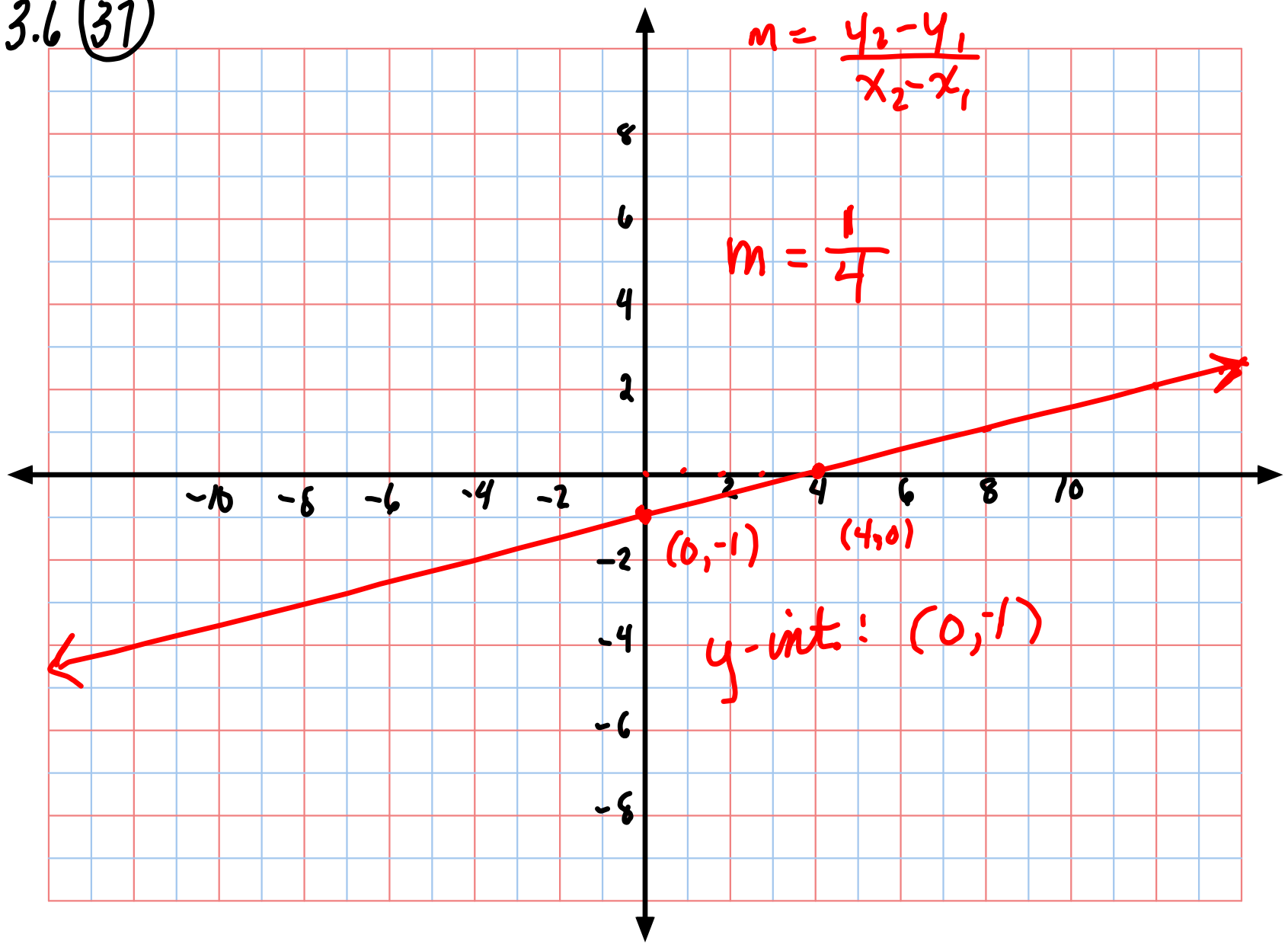
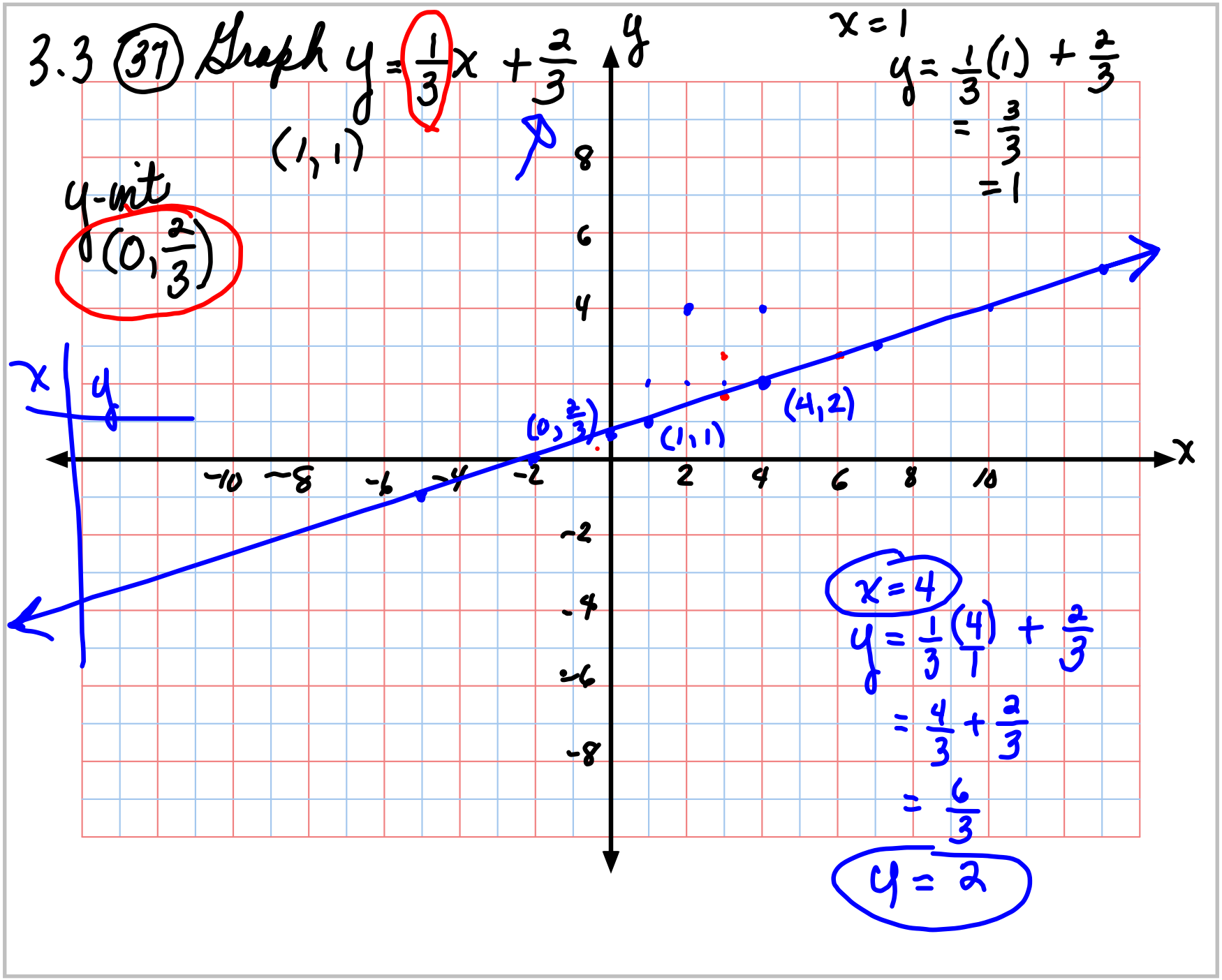
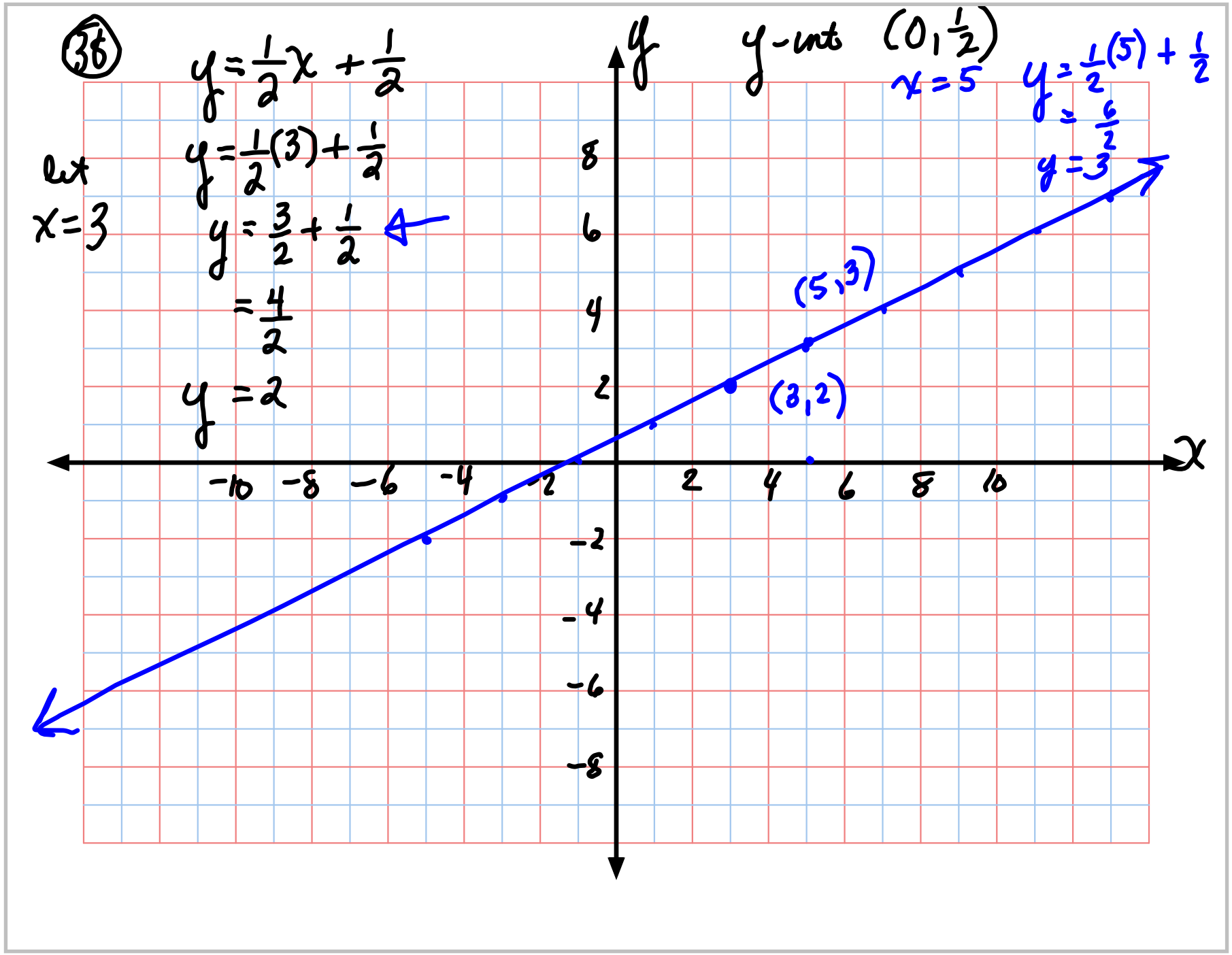

graphing
#6
$\frac{2y}{2} = \frac{3x}{2} - \frac{2}{2}$
$y = \frac{3}{2}x - 1$
$m = \frac{3}{2} = \frac{\Delta y}{\Delta x}$
y-int (0, -1)
$m = \frac{-1}{1} = \frac{\Delta y}{\Delta x}$
$y = -x + 6$
y
x
-12 -10 -8 -6 -4 -2 2 4 6 8 10 12
8 6 4 2 -2 -4 -6 -8

3.6 (37)




3.3 (37) Graph $y = \frac{1}{3}x + \frac{2}{3}$
(1, 1)
y-int
$(0, \frac{2}{3})$
x | y
$x = 1$
$y = \frac{1}{3}(1) + \frac{2}{3}$
$= \frac{3}{3}$
$= 1$
$(0, \frac{2}{3})$
(1, 1)
(4, 2)
$x = 4$
$y = \frac{1}{3}(4) + \frac{2}{3}$
$= \frac{4}{3} + \frac{2}{3}$
$= \frac{6}{3}$
$y = 2$


36
$y = \frac{1}{2}x + \frac{1}{2}$
$y = \frac{1}{2}(3) + \frac{1}{2}$
$y = \frac{3}{2} + \frac{1}{2}$
$= \frac{4}{2}$
$y = 2$
let $x = 3$
y-int $(0, \frac{1}{2})$
$x = 5$
$y = \frac{1}{2}(5) + \frac{1}{2}$
$= \frac{6}{2}$
$y = 3$
(5,3)
(3,2)
y
x
8
6
4
2
-2
-4
-6
-8
-10
-8
-6
-4
-2
2
4
6
8
10

4.1 Solving Systems of Linear Equations

or

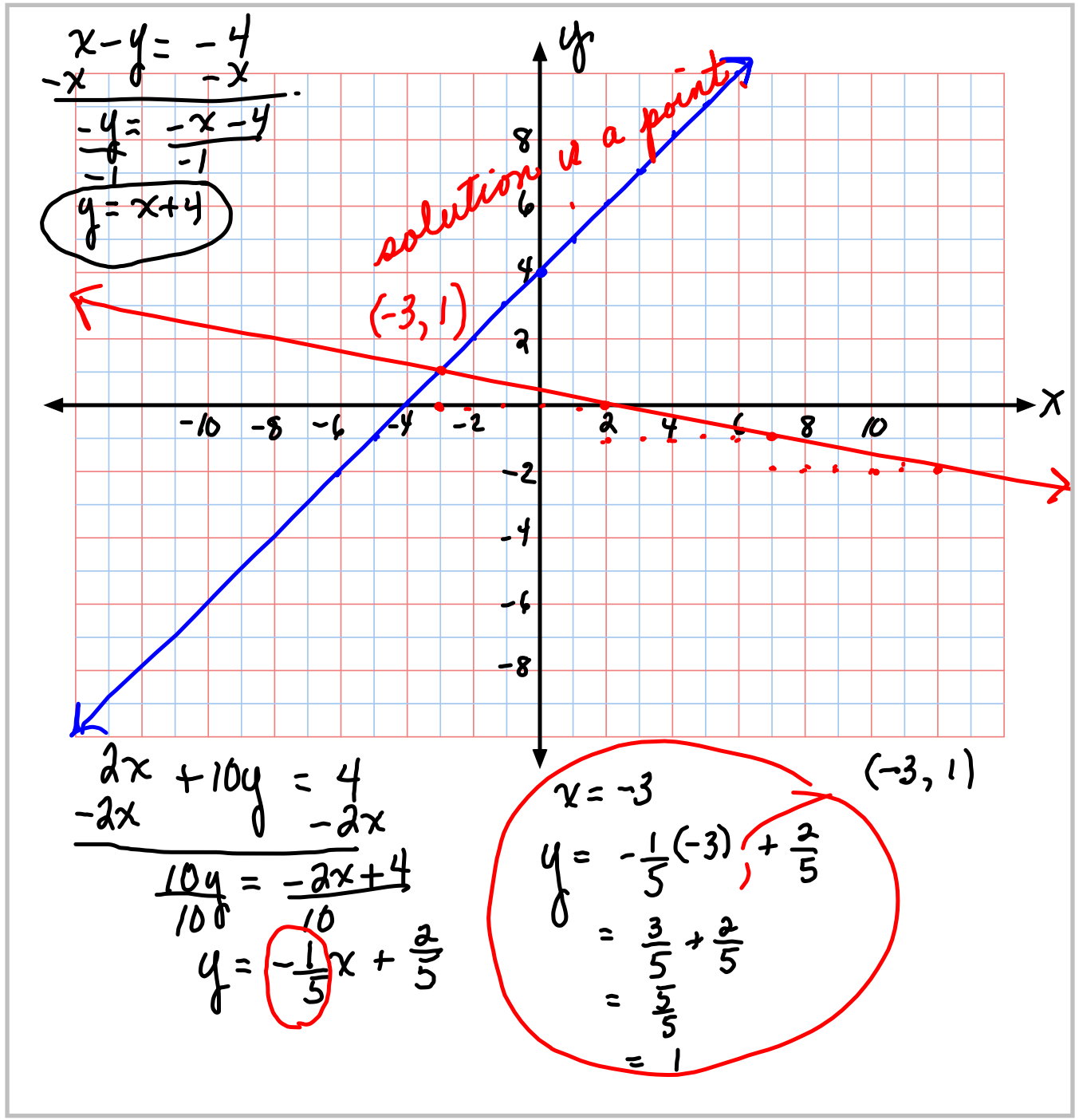
$$\left.\begin{aligned} x - y &= -4 \\ 2x + 18y &= 4 \end{aligned}\right\}$$ system of equations

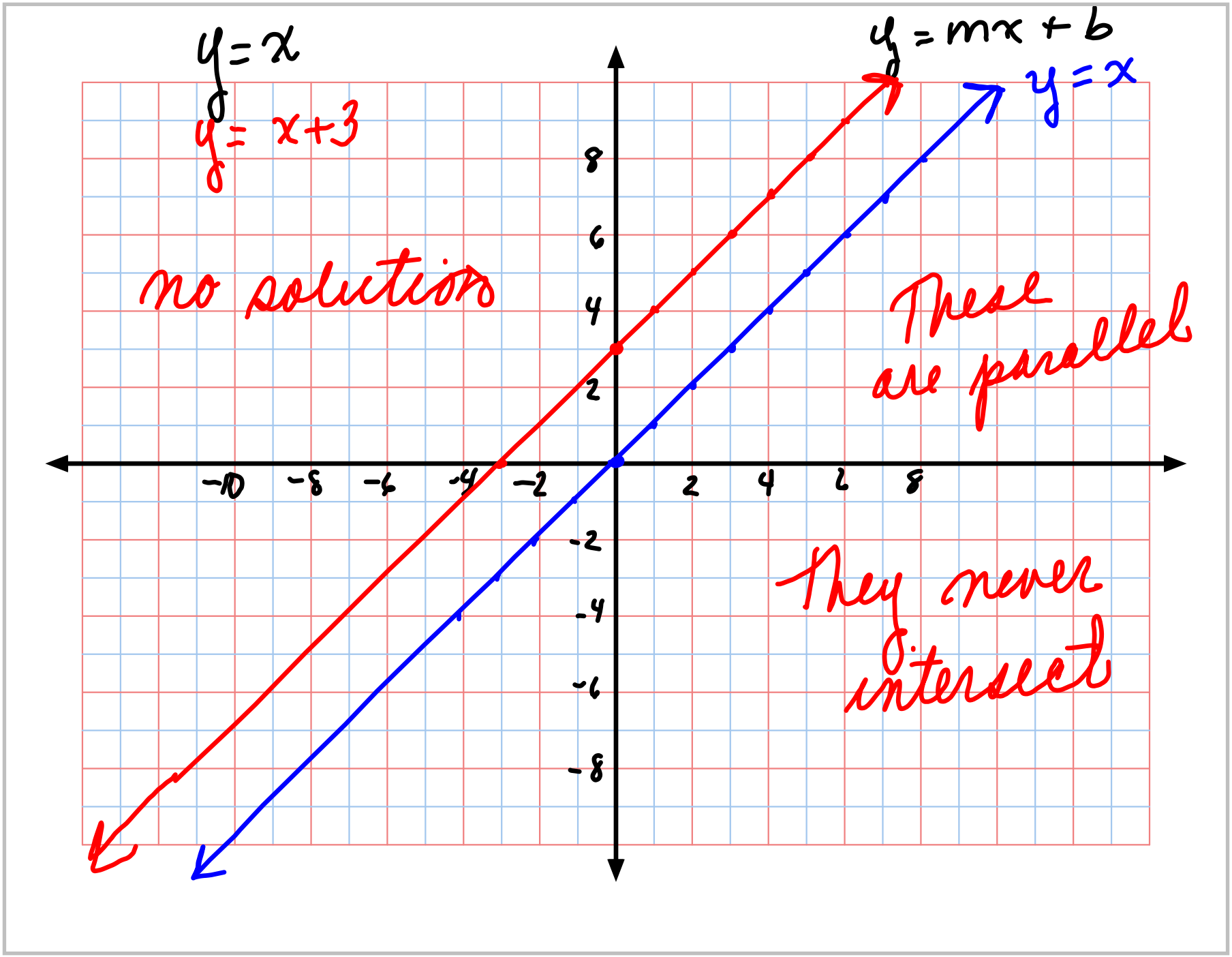
$y = -x + 6$ $\qquad$ $y = x - 2$

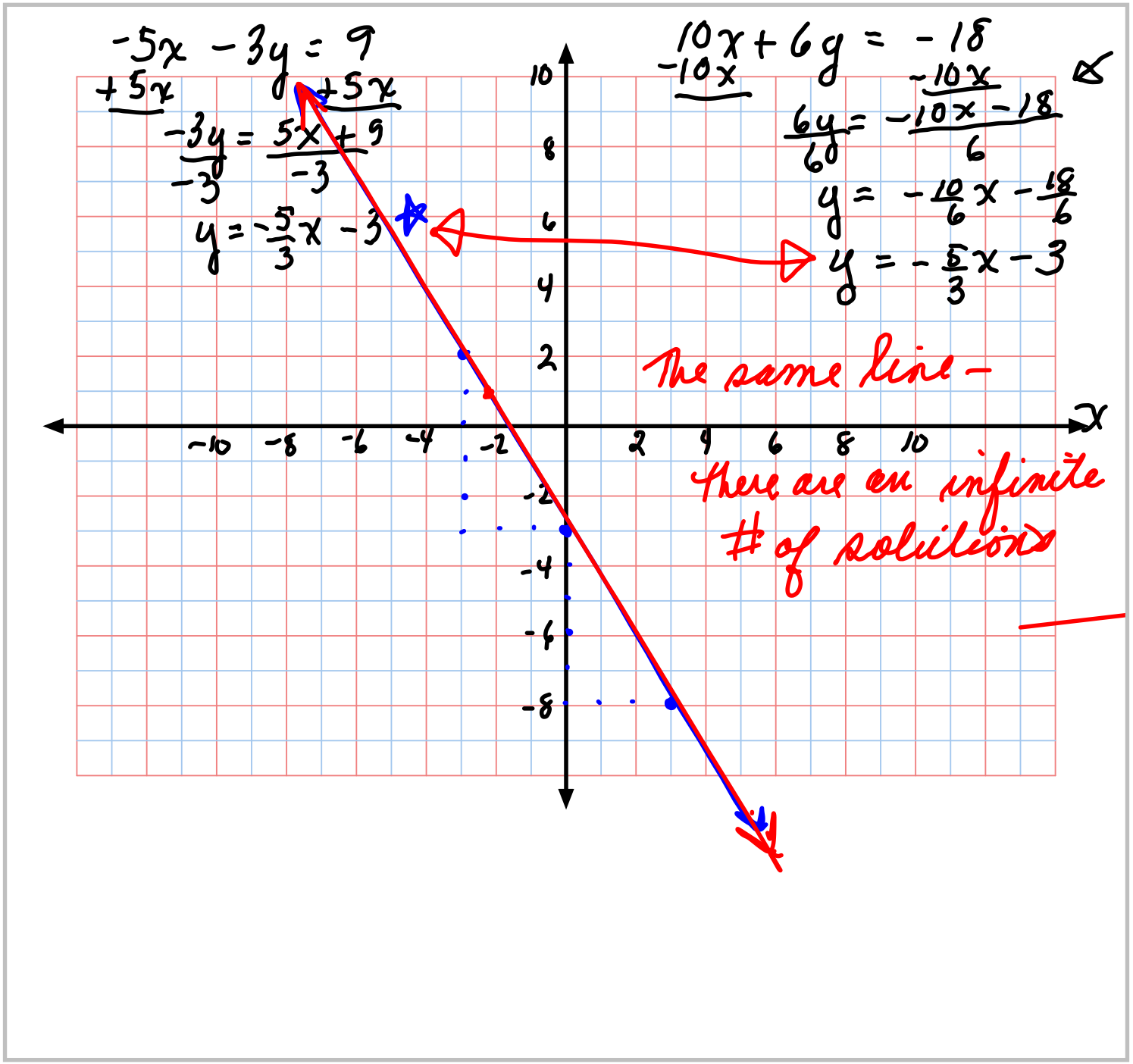
Check $2 = -4 + 6$ $\qquad$ $2 = 4 - 2$

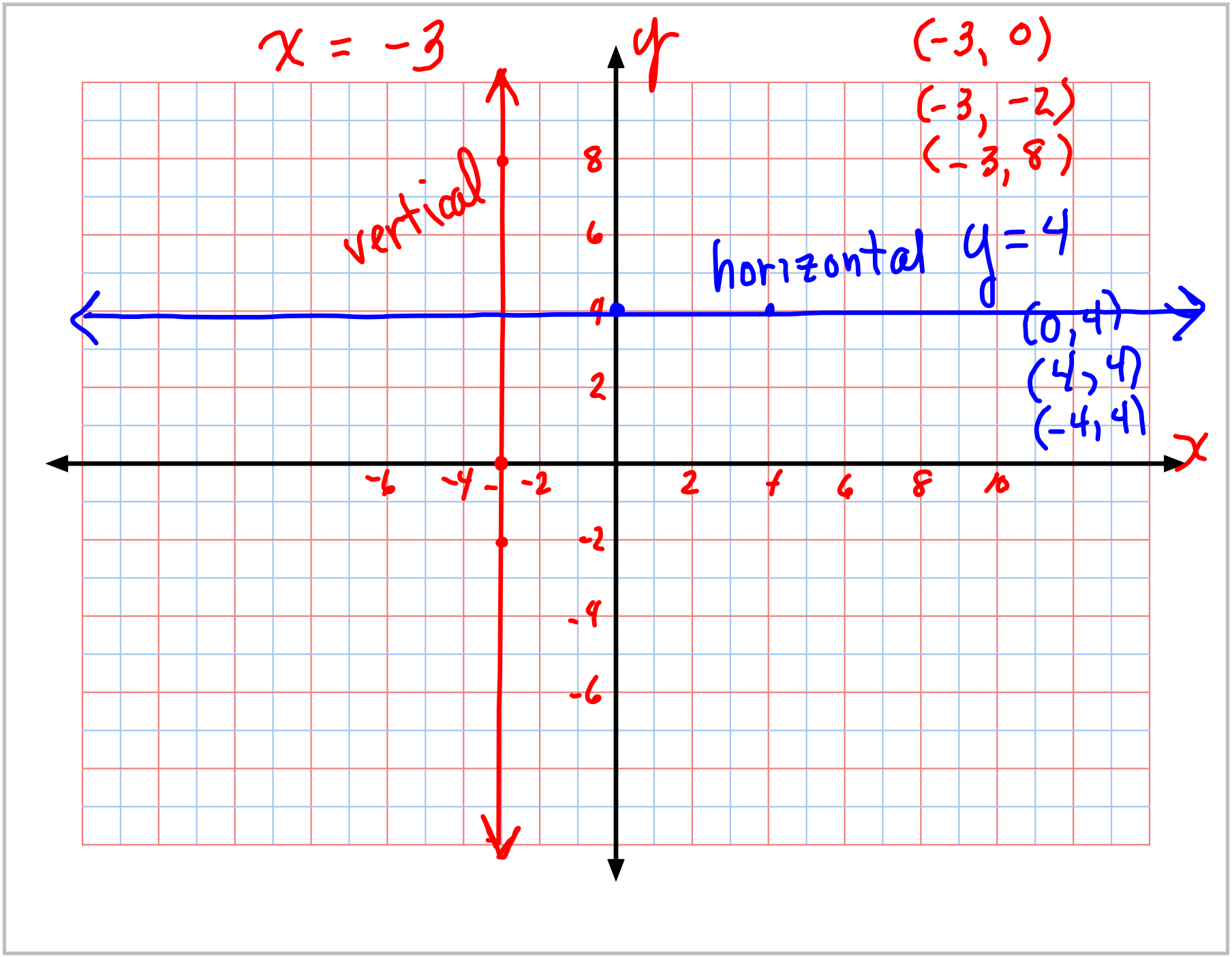
$2 = 2$ ✓ $\qquad$ $2 = 2$ ✓

$(4, 2)$ satisfies the system


x - y = -4
-x -x
-y = -x - 4
-1 -1
y = x + 4
y
x
8
6
4
2
-2
-4
-6
-8
-10 -8 -6 -4 -2 2 4 6 8 10
solution is a point
(-3, 1)
2x + 10y = 4
-2x -2x
10y = -2x + 4
10 10
y = -1/5 x + 2/5
(-3, 1)
x = -3
y = -1/5 (-3) + 2/5
= 3/5 + 2/5
= 5/5
= 1


y = x
y = x+3
y = mx + b
y = x
no solution
These are parallel
They never intersect
8
6
4
2
-2
-4
-6
-8
-10
-8
-6
-4
-2
2
4
6
8


$-5x - 3y = 9$
$+5x \quad +5x$
$\frac{-3y}{-3} = \frac{5x + 9}{-3}$
$y = -\frac{5}{3}x - 3$
$10x + 6y = -18$
$-10x \quad -10x$
$\frac{6y}{6} = \frac{-10x - 18}{6}$
$y = -\frac{10}{6}x - \frac{18}{6}$
$y = -\frac{5}{3}x - 3$
The same line -
There are an infinite # of solutions
x
10
8
6
4
2
-2
-4
-6
-8
-10
-8
-6
-4
-2
2
4
6
8
10


x = -3
y
(-3, 0)
(-3, -2)
(-3, 8)
vertical
horizontal y = 4
(0, 4)
(4, 4)
(-4, 4)
x
8
6
4
2
-2
-4
-6
-6
-4
-2
2
4
6
8
10

$$m = \frac{a}{1} = \frac{\Delta y}{\Delta x}$$