

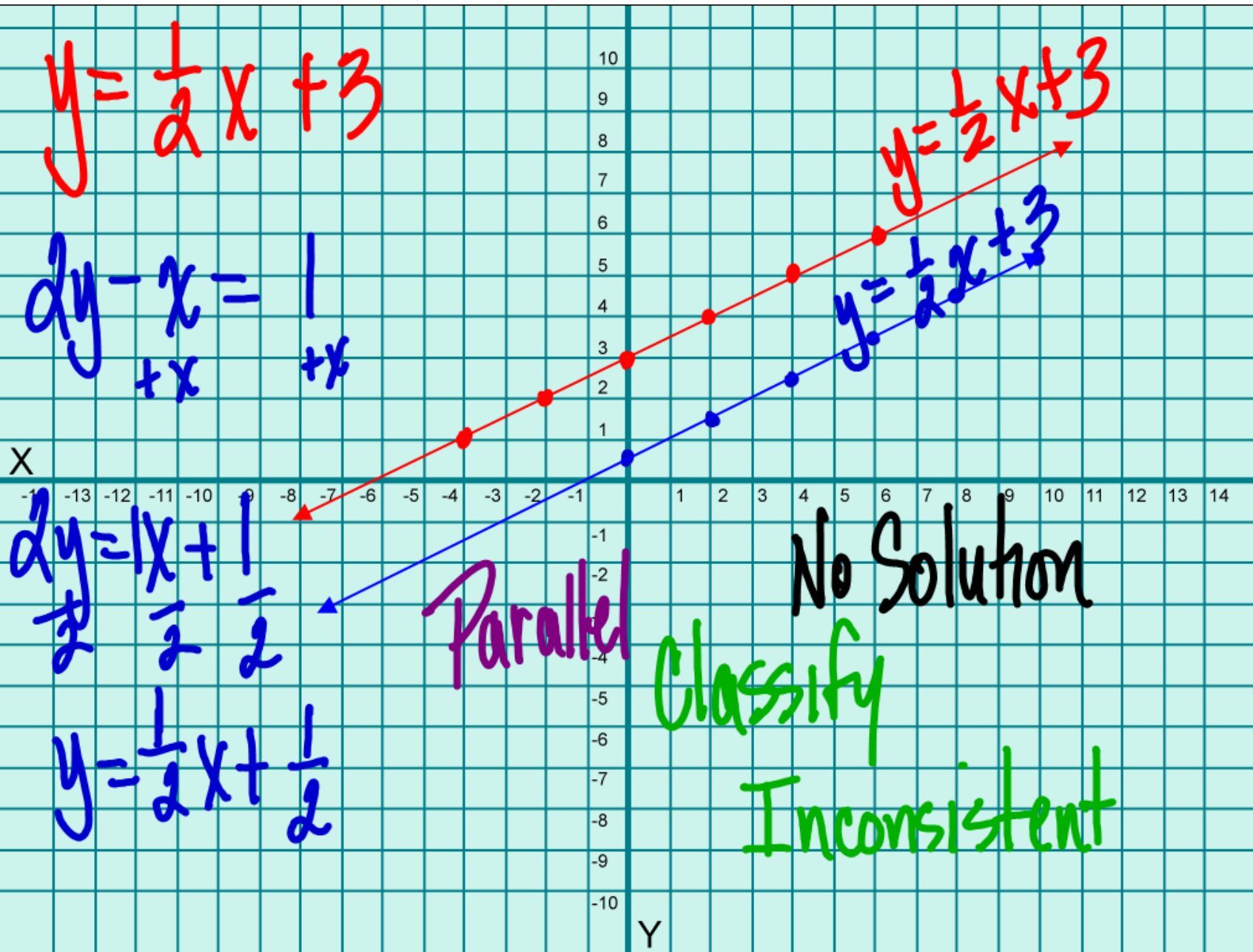


$$y = \frac{1}{2}x + 3$$

$$\frac{dy}{dx} = \frac{1}{2}$$

$$\frac{dy}{dx} = \frac{1}{2}x + \frac{1}{2}$$

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



Parallel

No Solution

Classify

Inconsistent



$$y = -x - 3$$

Same line

Infinitely  
Many Solutions

X



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

$$\frac{2y}{2} = \frac{-2x - 6}{2}$$

$$y = -x - 3$$

$$\frac{x}{y}$$

$$y = mx + b$$

Classify  
Consistent  
Dependent

$$\begin{array}{r} x + y = 7 \\ -x + y = 5 \\ \hline 0 \neq 2 \end{array}$$

$$y = -x + 7$$

$$y = -x + 5$$

Parallel

No Solution

Variables  
Zero out

Classify  
Inconsistent

$$\begin{array}{r} x + 3y = 4 \\ 2x + 6y = 8 \end{array}$$

Same line

Classify

Consistent  
Dependent

$$\begin{array}{r} -2x - 6y = -8 \\ + 2x + 6y = 8 \\ \hline 0 = 0 \end{array}$$

Variables  
Zero out

Test

Consistent

Inconsistent



Independent

Dependent

1 solution  
Intersect

Infinitely  
Many Solutions  
Same line

Parallel  
No Solution

p 342

12, 14, 20, 21

Ordered Pair ( )	$0 = 0$ Same Equation Infinitely Many Solutions Consistent Dependent	$0 \neq 5$ Parallel No Solution Inconsistent
Consistent Independent		