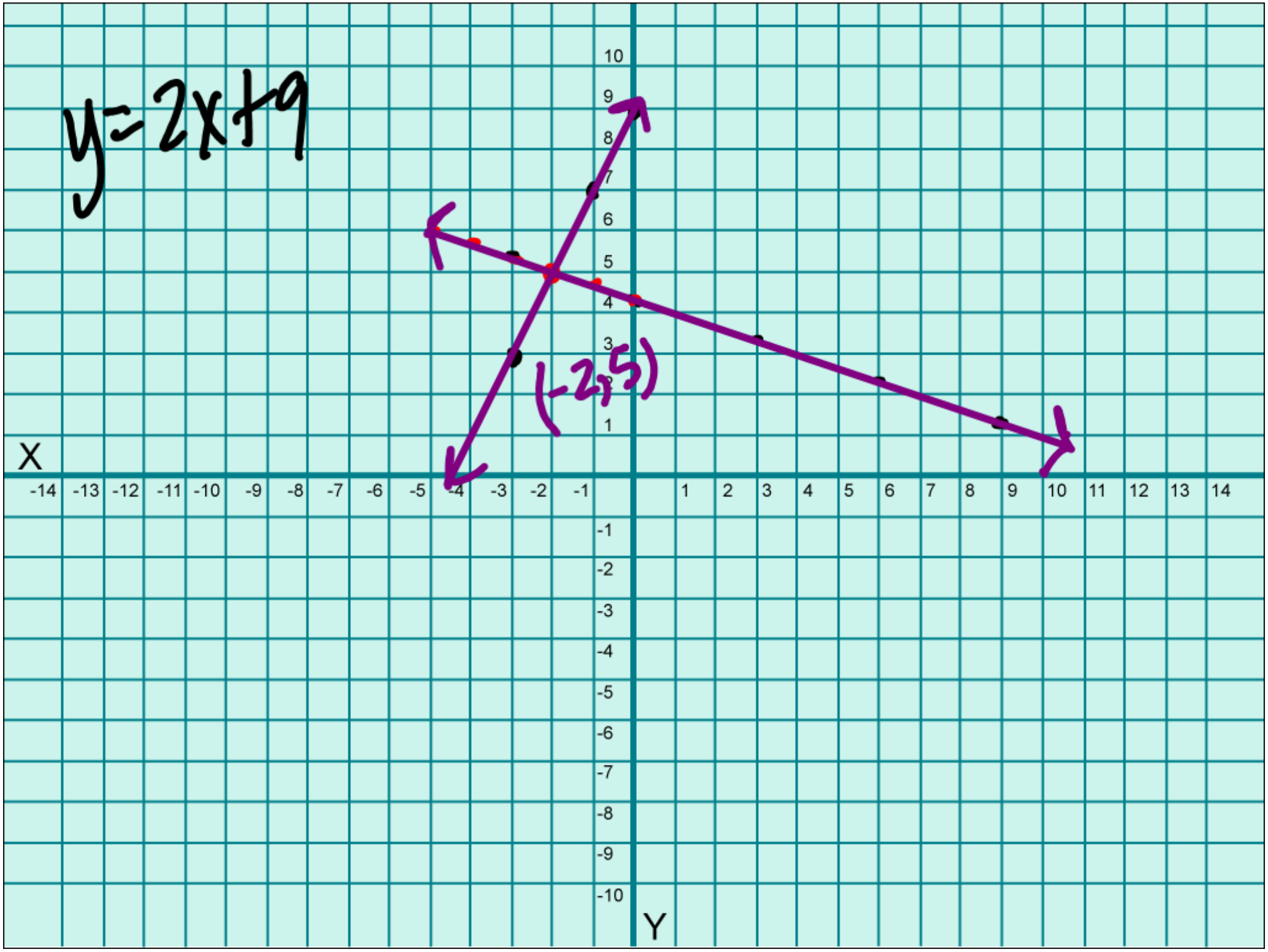
$y = 2x - 3$

$y = -\frac{3}{7}x + \frac{47}{7}$

$y = -\frac{1}{3}x + \frac{13}{3}$

$y = 2x + 9$


y=2x+9
(-2,5)
X
Y

42. ① $2x - 3y + 4z = 8$

② $3x + 2y = 7$

③ $x = 1$

$3(1) + 2y = 7$

$2y = 4$

$\frac{2y}{2} = \frac{4}{2}$

$y = 2$

$2(1) - 3(2) + 4z = 8$

$2 - 6 + 4z = 8$

$-4 + 4z = 8 + 4$

$\frac{4z}{4} = \frac{12}{4}$

$z = 3$

$(1, 2, 3)$

3.2 Systems of Equations

1. Graph
2. Substitution
3. Elimination → Addition Subtraction

$$\begin{array}{rl} & 2x + y = 8 \\ + & x - y = 10 \\ \hline & 3x = 18 \end{array}$$

$\frac{3x}{3} = \frac{18}{3}$

$x = 6$

$(6, -4)$

$-6 \quad -6$

$6 - y = 10$

$-y = 4$

$\frac{-y}{-1} = \frac{4}{-1}$

$y = -4$

$2x - 5y = 22$

$2x - 3y = 6 \quad \cdot -1$

$2x - 3(-8) = 6$
$2x + 24 = 6$
$-24 \quad -24$
$\frac{2x}{2} = \frac{-18}{2}$
$x = -9$

$2x - 5y = 22$
$+ \; -2x + 3y = -6$

$22 - 6 = 16$

$\frac{-2y}{-2} = \frac{16}{-2}$

$y = -8$

$2x - 5(-8) = 22$

$2x + 40 = 22$ $\quad -40 \quad -40$

$\frac{2x}{2} = \frac{-18}{2}$

$x = -9$

$(-9, -8)$

Substract

$2x - 5y = 22$
$- \; 2x - 3y = 6$

$\frac{-2y}{-2} = \frac{16}{-2}$

$y = -8$

$y = 2x + 5$

$\frac{3y}{3} = \frac{6x}{3} + \frac{15}{3}$

$y = 2x + 5$

$2x - 7y = 3 \quad \cdot 5$

$5x - 4y = -6 \quad \cdot -2$

$10x - 35y = 15$

$+ \; -10x + 8y = 12$

$-27y = 27$

$\frac{-27}{} \quad \frac{-27}{}$

$y = -1$

$2x - 7y = 3$

$2x - 7(-1) = 3$

$2x + 7 = 3$ $^{-7}$ $^{-7}$

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

$x = -2$

$(-2, -1)$

$5x - 3y = 8$ $\cdot -2$

$10x - 6y = 18$

$-10x + 6y = -16$

$10x - 6y = 18$

$0 \neq 2$

Not True

No Solution

Parallel

Inconsistent

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2, 10-26 E

Addition coefficients of 1 variable to be opposites

ex $3x$ $-3x$

$2x$ $-2x$

$7y$ $-7y$

Subtraction coefficients of 1 variable to be the same

ex $2x$ $2x$

$5y$ $5y$