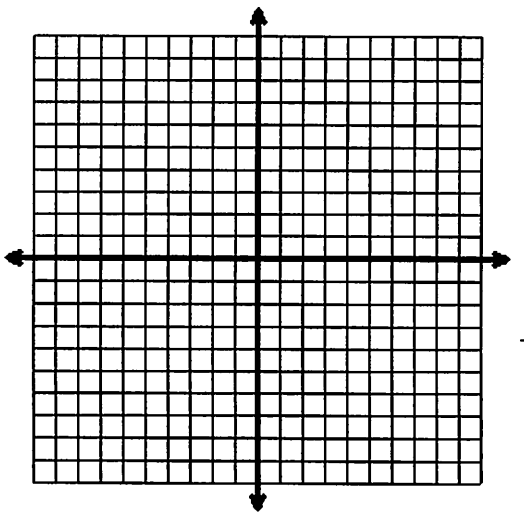
Solving Systems by Graphing Practice

Name _____

1. A: $2x - y = -5$

   B: $y = 6x + 1$



Solution: _____

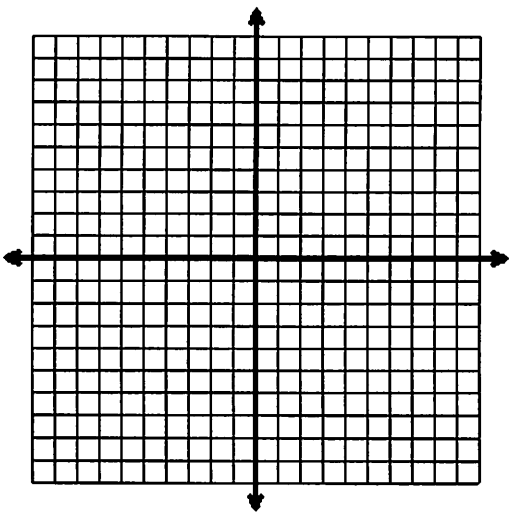
Check:

A:

B:

2. A: $y = \frac{4}{3}x - 2$

   B: $3y = 2x$



Solution: _____

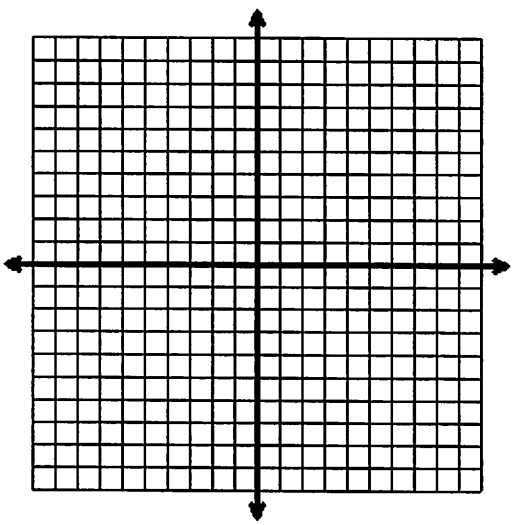
Check:

A:

B:

3. A: $y = -3x - 4$

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



Solution: _____

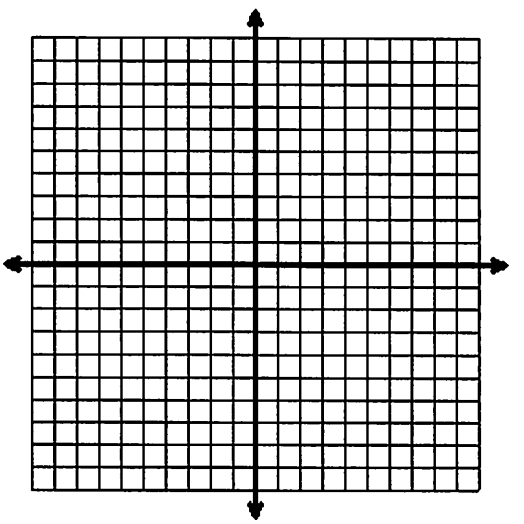
Check:

A:

B:

4. A: $y = -\frac{3}{2}x - 4$

   B: $2y - 8 = x$



Solution: _____

Check:

A:

B:

Without Graphing, decide whether each system has *one solution, no solutions,* or *infinitely many solutions*

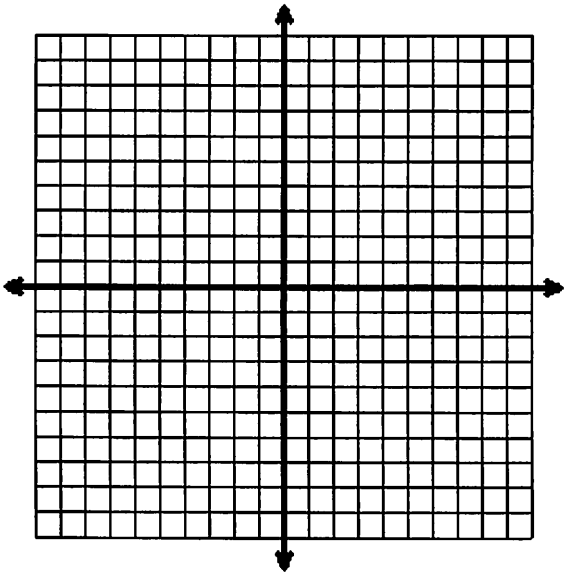
$2y = x$
$12y - 6x = 144$

$6x - \frac{3}{4}y = 18$
$-\frac{1}{4}x + y = 8$

$-\frac{1}{2}y = \frac{1}{2}x + 1$
$3(y+4) = -3x + 6$

Solve and Check the System of Equations

A: $\frac{y}{5} = -x + 1$



Solution: _____

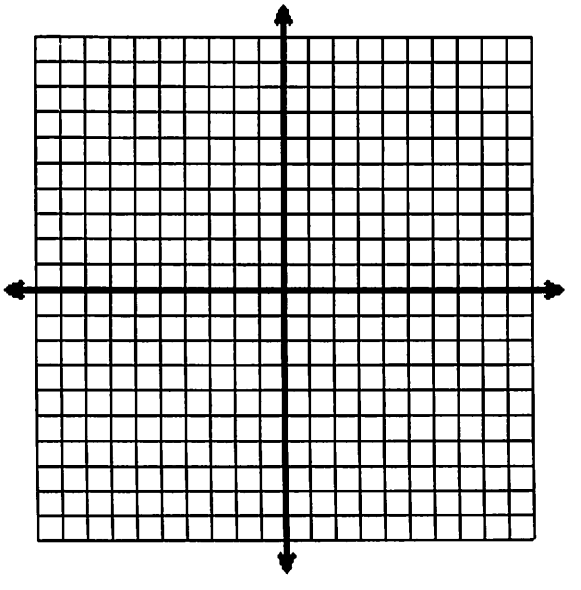
Check:

A:

B:

B: $4y = -3x - 28$

A: $y - x = 0$



Solution: _____

Check:

A:

B:

B: $2y = 4x$

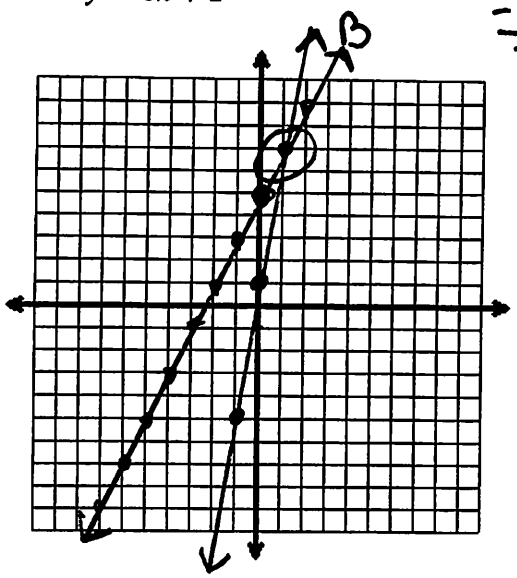
Solving Systems by Graphing Practice

Name _____

1. A: $2x - y = -5$

B: $y = 6x + 1$

$2x - y = -5$
$-2x \quad -2x$
$-y = -2x - 5$
$\frac{-y}{-1} = \frac{-2x}{-1} - \frac{5}{-1}$
$y = 2x + 5$



Solution: (1, 7)

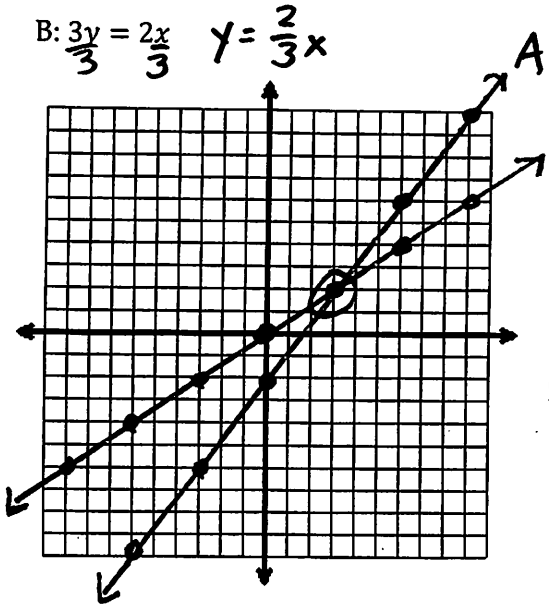
Check:

A: $2x - y = -5$
$2(1) - 7 = -5$
$2 - 7 = -5$
$-5 = -5$

B: $y = 6x + 1$
$7 = 6(1) + 1$
$7 = 6 + 1$
$7 = 7$

2. A: $y = \frac{4}{3}x - 2$

B: $\frac{3y}{3} = \frac{2x}{3}$ $y = \frac{2}{3}x$



Solution: (3, 2)

Check:

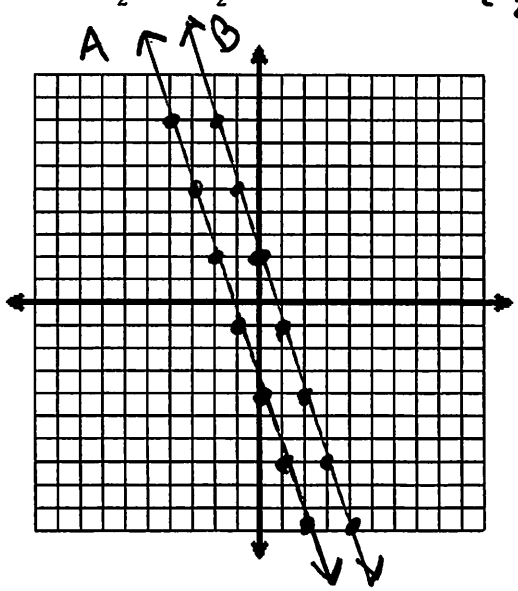
A: $y = \frac{4}{3}x - 2$
$2 = \frac{4}{3}(3) - 2$
$2 = 3 - 2$
$2 = 2$ ✓

B: $3y = 2x$
$3(2) = 2(3)$
$6 = 6$ ✓

3. A: $y = -3x - 4$

B: $\frac{1}{2}y = -\frac{3}{2}x + 1$ → $2 \cdot \frac{1}{2}y = \left(-\frac{3}{2}x + 1\right) \cdot 2$

$y = -3x + 2$



Solution: No Solution

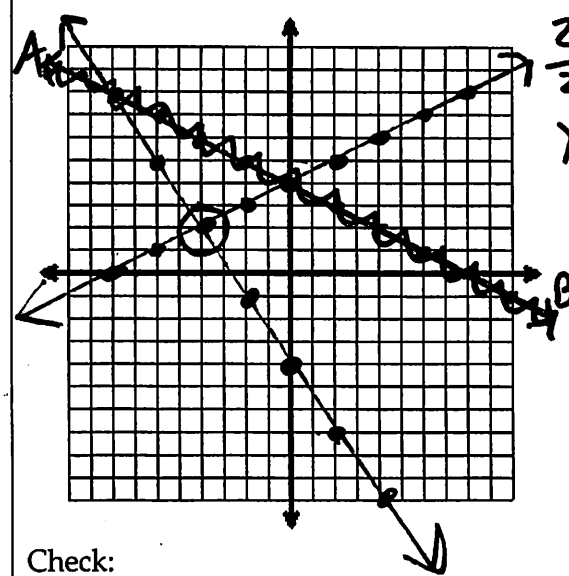
Check:

A:

B:

4. A: $y = -\frac{3}{2}x - 4$

B: $2y - 8 = x$ → $2y - 8 = x$
$+8 \quad +8$
$\frac{2y}{2} = \frac{x + 8}{2}$
$y = \frac{1}{2}x + 4$



Solution: ~~(-8, 0)~~ (-4, 2)

Check:

A:

B:

Without Graphing, decide whether each system has *one solution, no solutions,* or *infinitely many solutions*

$2y = x$

$12y - 6x = 144$

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

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

$12y - 6x = 144$

$\frac{12y}{12} = \frac{6x}{12} + \frac{144}{12}$

$y = \frac{1}{2}x + 12$

11 Lines
No Solution

$6x - \frac{3}{4}y = 18$

$-\frac{1}{4}x + y = 8 \rightarrow y = \frac{1}{4}x + 8$

$6x - \frac{3}{4}x = 18$

$-6x \quad -6x$

$\frac{4}{3}\left(-\frac{3}{4}y\right) = (-6x + 18)\frac{4}{3}$

$y = -8x + 24$

1 Solution

$\left(-\frac{1}{2}y = \frac{1}{2}x + 1\right) \cdot 2 \rightarrow y = -x - 2$

$3(y+4) = -3x + 6$

$3y + 12 = -3x + 6$

$\frac{3y}{3} = \frac{-3x}{3} - \frac{6}{3}$

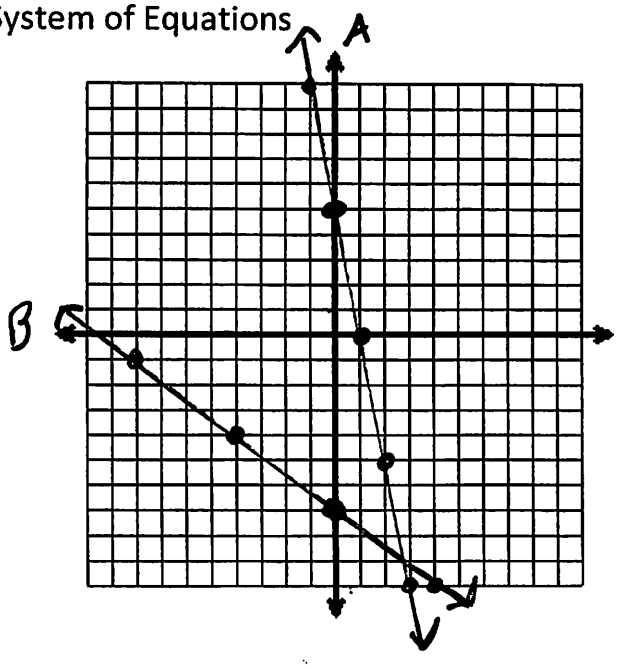
$y = -x - 2$

Infinitely Many Solutions

Solve and Check the System of Equations

A: $\frac{y}{5} = (-x + 1) \cdot 5$

$y = -5x + 5$



Solution:
1 Solution

Decimal Solution

Check:

A:

B:

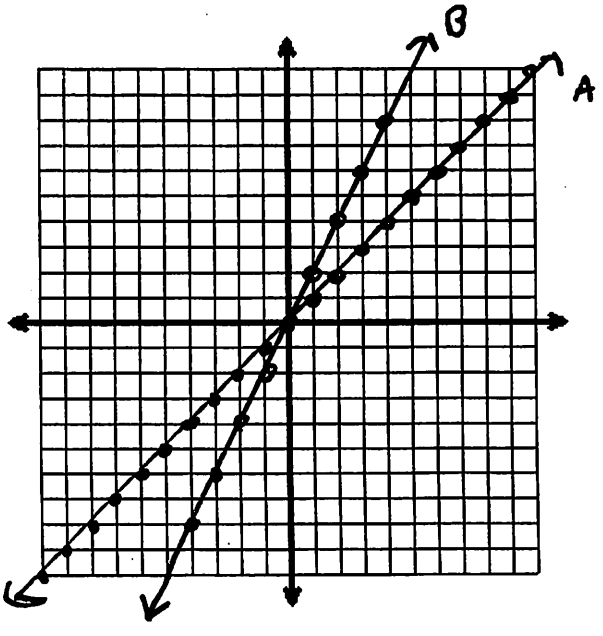
B: $\frac{4y}{4} = \frac{-3x}{4} - \frac{28}{4}$

$y = -\frac{3}{4}x - 7$

A: $y - x = 0$

$+x \quad +x$

$y = x$



Solution:
(0,0)

Check:

A:
$y - x = 0$
$0 - 0 = 0$
$0 = 0$

B:
$2y = 4x$
$2(0) = 4(0)$
$0 = 0$

B: $\frac{2y}{2} = \frac{4x}{2}$

$y = 2x$