

Solving Linear Systems Graphically

Solve each system by graphing on grid paper. For at least three questions, do a “left-side / right-side” check, as demonstrated in class.

1. Solve each system by graphing. Check your solutions.

a) $y = x - 1$
 $y = 9 - x$

b) $y = x + 3$
 $y = 1 - x$

c) $y = 2x + 1$
 $y = x - 2$

d) $y = 1 - 2x$
 $y = x - 5$

2. Solve each system by graphing. Check your solutions.

a) $x - y = -5$
 $x + y = 1$

b) $5x - 2y = 10$
 $x + 2y = 2$

c) $3x - 2y = 12$
 $x - 2y = 8$

d) $2x + 3y = -12$
 $2x - y = -4$

3. Solve each system by graphing. Check your solutions.

a) $x - y = 4$
 $x + y = 2$

b) $x + y = 5$
 $x - y = -7$

c) $x + 2y = 2$
 $x + y = 3$

d) $x + 3y = -1$
 $2x + 6y + 2 = 0$

e) $2x + y = 12$
 $3x - 2y = 18$

f) $2x + y = -2$
 $4x = y - 16$

g) $y = 2x - 3$
 $2x - y = 5$

h) $2x + y = -5$
 $3x - y = -5$

i) $2x - y = 5$
 $y = x - 3$

j) $3x + y = -11$
 $y = 2x + 4$

k) $3x + 4y - 16 = 0$
 $x - 2y - 2 = 0$

l) $3x = y + 8$
 $6x - 2y - 1 = 0$

m) $2x + 3y = 7$
 $2x - 3y = 13$

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

o) $2x - 3y = 4$
 $3x - 4y = 5$

p) $3x + 2y - 10 = 0$
 $2x - 3y + 2 = 0$

Solving Linear Systems Graphically — Final Answers

Final answers only.

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|------------------------|------------------------------|----------------|------------------------------|
| 1. a) $(5, 4)$ | b) $(-1, 2)$ | c) $(-3, -5)$ | d) $(2, -3)$ |
| 2. a) $(-2, 3)$ | b) $(2, 0)$ | c) $(2, -3)$ | d) $(-3, -2)$ |
| 3. a) $(3, -1)$ | b) $(-1, 6)$ | c) $(4, -1)$ | d) infinitely many solutions |
| e) $(6, 0)$ | f) $(-3, 4)$ | g) no solution | h) $(-2, -1)$ |
| i) $(2, -1)$ | j) $(-3, -2)$ | k) $(4, 1)$ | l) no solution |
| m) $(5, -1)$ | n) infinitely many solutions | o) $(-1, -2)$ | p) $(2, 2)$ |