

Algebra Square Puzzle: Systems of Equations

Directions: Cut out the square below along the bold lines. Rearrange these squares back into a 4x4 grid by working a given problem, finding the answer (simplified fully) on a square, and placing the problem and answer on adjacent edges. When all problems have been completed, if your work is correct, then the pieces will fit perfectly to re-form a 4x4 grid. Paste or tape your completed puzzle to a piece of paper.

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|-------------------------------|--|---------------------------------|------------------------------------|-----------------------------|--------------------|--------------------------------|--|------------------------|--------------------------------|
| | $x - 2y = 5$ $3x - 5y = 8$ | | $(0, 0)$ | | $(3, -2)$ | | $(-1, -5)$ | | |
| $(0, -4)$ | A | $5x + 4y = 12$ $3x = 4 + 4y$ | B | $y = 3x + 5$ $y = x + 5$ | $(4, 2)$ | C | $3x - y = 4$ $6x + 2y = -8$ | $(0, 3)$ | D |
| | | | $2x - y = -4$ $-3x + y = -9$ | | | | $\frac{1}{2}x + \frac{2}{3}y = -3$ $4x - \frac{1}{3}y = -7$ | | |
| | $y = -4x + 20$ $x - \frac{2}{3}y = \frac{4}{3}$ | | | | $(-2, -3)$ | | | | |
| $(0, 5)$ | E | $(3, 4)$ | $(\frac{1}{3}, \frac{1}{4})$ | F | $(2, \frac{1}{2})$ | G | $(0, \frac{1}{4})$ | H | $x - 3y = 3$ $2x + 9y = 11$ |
| | $y + 4x = 12$ $3y - 4x = 8$ | | $x + 3y = 5$ $-x + y = 3$ | | | | $y = x - 2$ $y = 4x + 1$ | | |
| | $(-1, -3)$ | | $(3, -4)$ | | $(-1, 2)$ | | $(\frac{7}{4}, 5)$ | | |
| $3x = 13 - y$ $2x - y = 2$ | I | $3x + y = 6$ $4x + y = 7$ | J | $x + y = 6$ $y = 2x$ | $(3, 1)$ | K | $(\frac{5}{3}, \frac{1}{4})$ | $(3, 3)$ | |
| | $(1, 2)$ | | | | | $2x + 3y = -17$ $y = x - 4$ | $y = x - 5$ $y = -2x + 4$ | | |
| | | | | | $(13, 30)$ | | $2x - 3y = -4$ $x = 7 - 3y$ | | |
| $y - 4x = 3$ $y = x$ | M | $2x + y = 8$ $x - y = 4$ | N | $(-1, -1)$ | | O | $4x - 3y = 11$ $2x + 3y = 13$ | $9 = 4 + x$ $x = 4$ | $x - y = 3$ $y + x = 3$ |
| | $(4, 4)$ | | $y = \frac{1}{2}x$ $x + 2y = 0$ | | | $x = y + 7$ $2x + y = 2$ | | $(-9, -7)$ | |