

# Enrich

## Equations with Two Variables

To solve equations containing two variables, find ordered pair solutions for the equation by selecting values for  $x$  and completing a table. Although any value can be selected for  $x$ , values usually selected include  $-2, -1, 0, 1,$  and  $2$ .

For example, to solve the equation  $y = 2x$  given below in Exercise 1, first select values for  $x$ , then complete a table. Ordered pair solutions for the equation  $y = 2x$  include  $(-2, -4), (-1, -2), (0, 0), (1, 2),$  and  $(2, 4)$ .

Match each equation with the point whose coordinates are a solution of the equation. Then, at the bottom of the page, write the letter of the point on the line directly above the number of the equation *each time it appears*. (The first one has been done as an example.) If you have matched the equations and solutions correctly, the letters below will reveal a message.

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|-----------------------|-------------|-------------|
| 1. $y = 2x$           | $A(-3, 8)$  | $N(-1, 0)$  |
| 2. $y = x - 3$        | $B(0, 2)$   | $O(3, 0)$   |
| 3. $y = -x + 1$       | $C(-2, 1)$  | $P(1, 5)$   |
| 4. $y = 3x - 2$       | $D(0, -5)$  | $Q(0, 6)$   |
| 5. $y = -2x - 4$      | $E(-1, -5)$ | $R(1, 6)$   |
| 6. $y = x + (-2)$     | $F(1, 3)$   | $S(2, 1)$   |
| 7. $y = -4x - 1$      | $G(0, -4)$  | $T(-2, 3)$  |
| 8. $y = \frac{1}{2}x$ | $H(-1, 3)$  | $U(1, 2)$   |
| 9. $y = x + 3$        | $I(2, 0)$   | $V(-3, 5)$  |
| 10. $y = 7x + 7$      | $J(0, 4)$   | $W(0, -7)$  |
| 11. $y = -2x - 6$     | $K(-3, 1)$  | $X(-3, -3)$ |
| 12. $y = -x + 5$      | $L(-4, 2)$  | $Y(1, 8)$   |
| 13. $y = -5x + 8$     | $M(-2, 2)$  | $Z(0, -8)$  |
| 14. $y = -x$          |             |             |

$\overline{14}$   $\overline{12}$   $\overline{3}$   $\overline{7}$   $\overline{4}$   $\overline{14}$   $\overline{12}$   $\overline{3}$   $\overline{6}$   $\overline{9}$   $\overline{8}$        $\overline{6}$   $\overline{8}$        $\overline{3}$   $\overline{7}$   $\overline{4}$

$\overline{11}$   $\overline{12}$   $\overline{10}$   $\overline{5}$   $\overline{1}$   $\overline{12}$   $\overline{5}$   $\overline{4}$        $\overline{2}$   $\overline{13}$        $\overline{8}$   $\overline{9}$   $\overline{6}$   $\overline{4}$   $\overline{10}$   $\overline{9}$   $\overline{4}$