

Algebra 1

Topic: Graphing Linear Equations in Standard Form

Instructions

Solve the following problems. Use graphs where necessary. Show all work clearly.

Practice Problems

- 1. Rewrite the following equations in standard form Ax + By = C and identify A, B, and C:
 - i. y = 3x 5
 - ii. x + 4y = 8iii. 2x = 5y + 10
- 2. Match the equations to their graphs:
 - i. x + y = 4ii. 2x - y = -2

iii. x - 3y = 9



- 3. Find the *x* and *y*-intercepts of the following equations:
 - i. 2x + 3y = 12iv. -6x + 9y = -18ii. 3x + 6y = 24v. -3x 6y = 2iii. -4x + 8y = -16vi. -x + 8y = 4

4. Use intercepts to graph the following linear equations:

i. $5x + 3y = 30$	v. $3x - y = -5$
ii. $4x + 6y = 12$	vi. $-\frac{5}{2}x + y = 10$
iii12x + 3y = 24	
iv. $-2x + 6y = 18$	vii. $-\frac{1}{2}x + y = -4$

Multiple Choice Questions

1. Which of the following equations is written in standard form?

a.
$$y = -2x + 5$$

b. $x + 2y = 5$
c. $y - 2 = 3x$
d. $2x - y = 4$

- 2. What is the *y*-intercept of the line 2x + 3y = 6?
 - a. 2
 b. -2
 c. 6
 d. 3

3. What is the *x*-intercept of the equation 4x - 2y = 8?

a. (-2,0)
b. (0,-4)
c. (2,0)
d. (0,2)

- 4. Which of the following equations has an x-intercept of 3 and a y-intercept of -2?
 - a. 2x 3y = 6b. 3x + 2y = 6c. x - 2y = 3d. 2x + 3y = 6
- 5. A line passes through (1,3) and (4,-3). What is the equation of the line in standard form?
 - a. x + 2y = -5b. 2x + y = 5c. x - 2y = 5
 - d. 2x y = -5

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