

## Algebra I

152. If  $x = -7$ , then  $-x =$

- A  $-7$
- B  $-\frac{1}{7}$
- C  $\frac{1}{7}$
- D  $7$

M02863

153. The perimeter,  $P$ , of a square may be found by using the formula  $\left(\frac{1}{4}\right)P = \sqrt{A}$ , where  $A$  is the area of the square. What is the perimeter of the square with an area of 36 square inches?

- A 9 inches
- B 12 inches
- C 24 inches
- D 72 inches

M00057

154. What is the reciprocal of  $\frac{ax^2}{y}$ ?

- A  $-\frac{ax^2}{y}$
- B  $-\frac{y}{ax^2}$
- C  $\frac{ax^2}{y}$
- D  $\frac{y}{ax^2}$

M13174

155. If  $x$  is an integer, what is the solution to  $|x - 3| < 1$ ?

- A  $\{-3\}$
- B  $\{-3, -2, -1, 0, 1\}$
- C  $\{3\}$
- D  $\{-1, 0, 1, 2, 3\}$

M03035

156. Assume  $y$  is an integer and solve for  $y$ .

$$|y + 2| = 9$$

- A  $\{-11, 7\}$
- B  $\{-7, 7\}$
- C  $\{-7, 11\}$
- D  $\{-11, 11\}$

M02242

157. If  $x$  is an integer, which of the following is the solution set for  $3|x| = 15$ ?

- A  $\{0, 5\}$
- B  $\{-5, 5\}$
- C  $\{-5, 0, 5\}$
- D  $\{0, 45\}$

M00059

## Algebra I

158. Which of the following is equivalent to  $4(x + 5) - 3(x + 2) = 14$ ?

- A  $4x + 20 - 3x - 6 = 14$
- B  $4x + 5 - 3x + 6 = 14$
- C  $4x + 5 - 3x + 2 = 14$
- D  $4x + 20 - 3x - 2 = 14$

M02936

159. Which of the following is equivalent to  $9 - 3x > 4(2x - 1)$ ?

- A  $13 < 11x$
- B  $13 > 11x$
- C  $10 > 11x$
- D  $6x > 0$

M02531

$$\frac{20}{x} = \frac{4}{x-5}$$

160. Which of the following is equivalent to the equation shown above?

- A  $x(x - 5) = 80$
- B  $20(x - 5) = 4x$
- C  $20x = 4(x - 5)$
- D  $24 = x + (x - 5)$

M02403

161. Which of the following is equivalent to  $1 - 2x > 3(x - 2)$ ?

- A  $1 - 2x > 3x - 2$
- B  $1 - 2x > 3x - 5$
- C  $1 - 2x > 3x - 6$
- D  $1 - 2x > 3x - 7$

M02231

## Algebra I

162. Colleen solved the equation  $2(2x + 5) = 8$  using the following steps.

Given:  $2(2x + 5) = 8$

Step 1:  $4x + 10 = 8$

Step 2:  $4x = -2$

Step 3:  $x = -\frac{1}{2}$

To get from Step 2 to Step 3, Colleen—

- A divided both sides by 4.
- B subtracted 4 from both sides.
- C added 4 to both sides.
- D multiplied both sides by 4.

M03139

163. Solve for  $x$ .

$$5(2x - 3) - 6x < 9$$

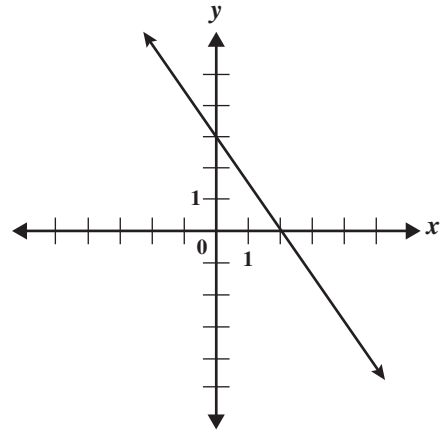
- A  $x < -1.5$
- B  $x < 1.5$
- C  $x < 3$
- D  $x < 6$

M02938

164. Which inequality represents the solution of  $(11x + 2) + (6x + 4) + (x + 5) > 90$ ?

- A  $x > \frac{79}{18}$
- B  $x > \frac{79}{17}$
- C  $x > \frac{101}{18}$
- D  $x > \frac{101}{17}$

M20669



165. What is an equation of the line shown in the graph above?

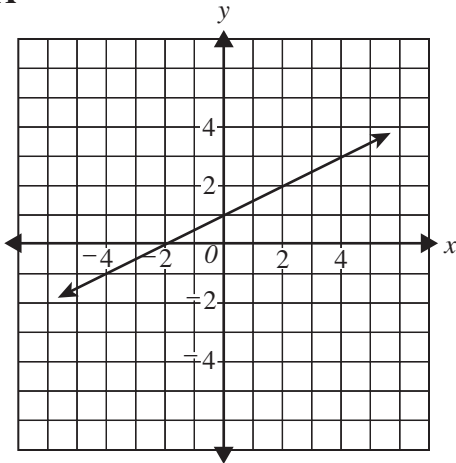
- A  $y = -\frac{3}{2}x + 3$
- B  $y = -\frac{2}{3}x + 2$
- C  $y = \frac{3}{2}x - 3$
- D  $y = \frac{2}{3}x - 2$

M00228

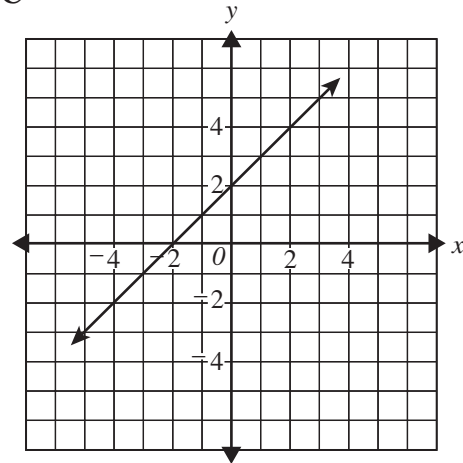
*Algebra I*

166. Which of the following is the graph of  $y = \frac{1}{2}x + 2$ ?

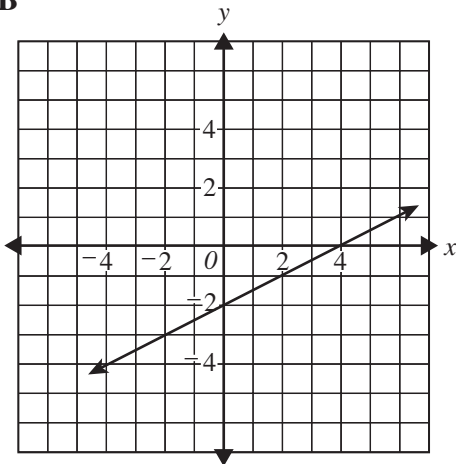
**A**



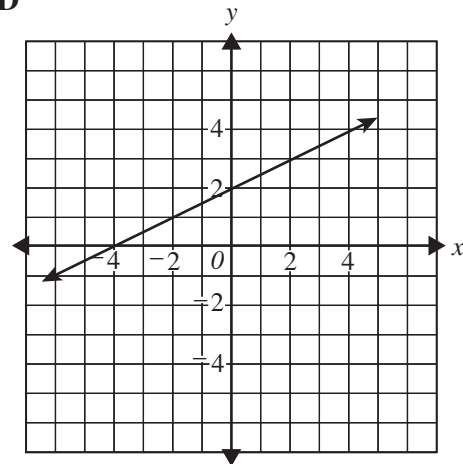
**C**



**B**



**D**



M02026

*Algebra I*

167. What is the y-intercept of the line  
 $2x - 3y = 12$ ?

- A (0, -4)
- B (0, -3)
- C (2, 0)
- D (6, 0)

M02591

168. What are the coordinates of the x-intercept  
of the line  $3x + 4y = 12$ ?

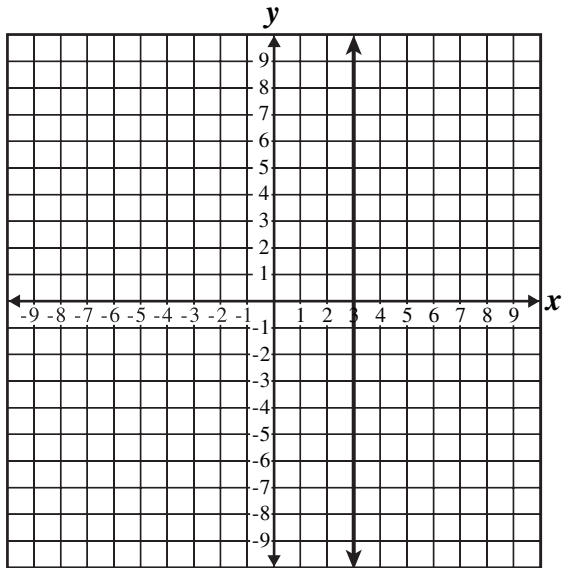
- A (0, 3)
- B (3, 0)
- C (0, 4)
- D (4, 0)

M02462

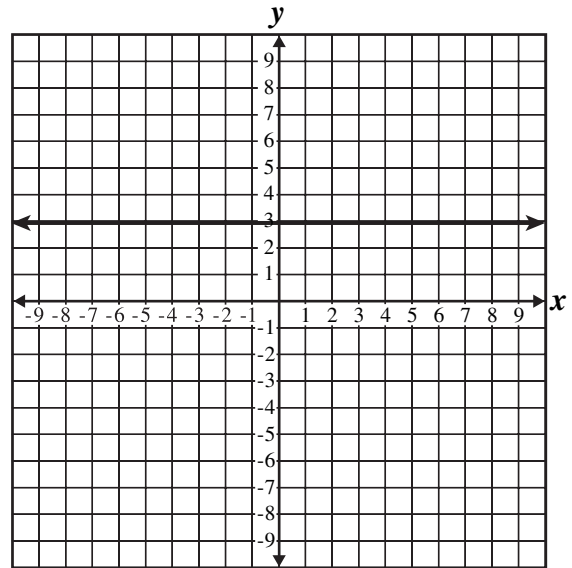
*Algebra I*

169. What is the graph of the equation  $x = 3$ ?

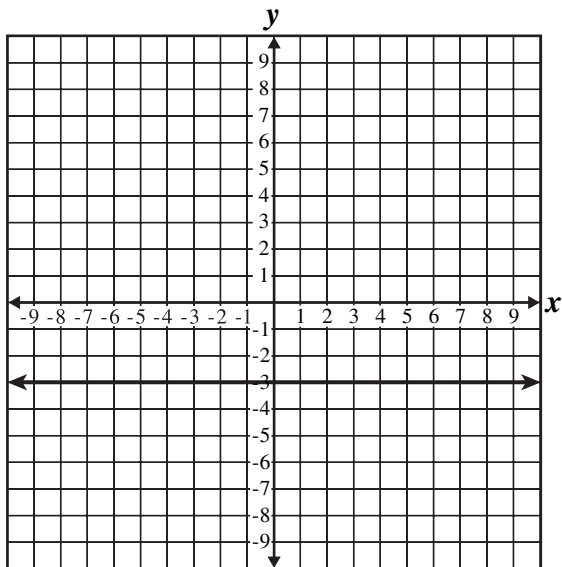
A



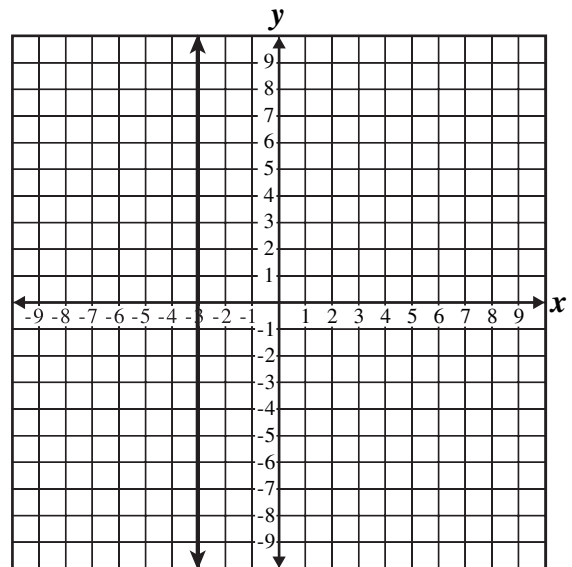
C



B



D



M13541

## Algebra I

170. Which of the following points lies on the line  $y = x$ ?

- A  $(-4, -4)$
- B  $(-4, 4)$
- C  $(4, -4)$
- D  $(-4, 0)$

M02594

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171. Which of the following points lies on the line  $4x + 5y = 20$ ?

- A  $(0, 4)$
- B  $(0, 5)$
- C  $(4, 5)$
- D  $(5, 4)$

M02565

172. What is the slope of a line parallel to the line

$$y = \frac{1}{3}x + 2?$$

- A  $-3$
- B  $-\frac{1}{3}$
- C  $\frac{1}{3}$
- D  $2$

M02653

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173. Which of the following statements describes parallel lines?

- A Same  $y$ -intercept but different slopes
- B Same slope but different  $y$ -intercepts
- C Opposite slopes but same  $x$ -intercepts
- D Opposite  $x$ -intercepts but same  $y$ -intercept

M02610

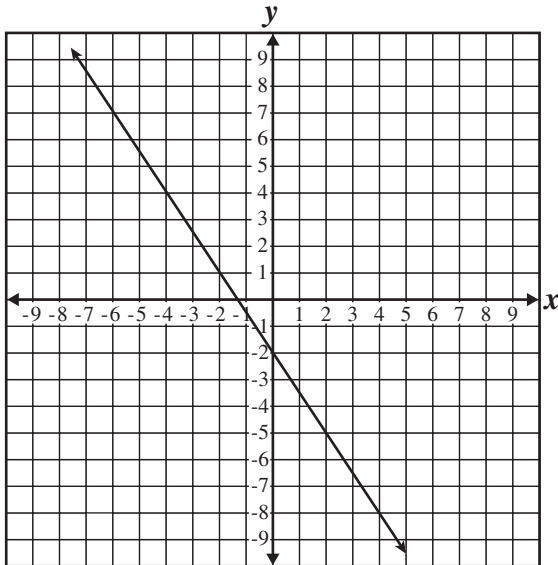
# Algebra I

174. Which of the following could be the equation of a line parallel to the line  $y = 4x - 7$ ?

- A  $y = \frac{1}{4}x - 7$
- B  $y = 4x + 3$
- C  $y = -4x + 3$
- D  $y = -\frac{1}{4}x - 7$

M02651

175. What is the slope of a line parallel to the line below?



- A  $-\frac{3}{2}$
- B  $-\frac{2}{3}$
- C  $\frac{2}{3}$
- D  $\frac{3}{2}$

M12410

$$\begin{cases} 7x + 3y = -8 \\ -4x - y = 6 \end{cases}$$

176. What is the solution to the system of equations shown above?

- A  $(-2, -2)$
- B  $(-2, 2)$
- C  $(2, -2)$
- D  $(2, 2)$

M02956

$$\begin{cases} y = 3x - 5 \\ y = 2x \end{cases}$$

177. What is the solution of the system of equations shown above?

- A  $(1, -2)$
- B  $(1, 2)$
- C  $(5, 10)$
- D  $(-5, -10)$

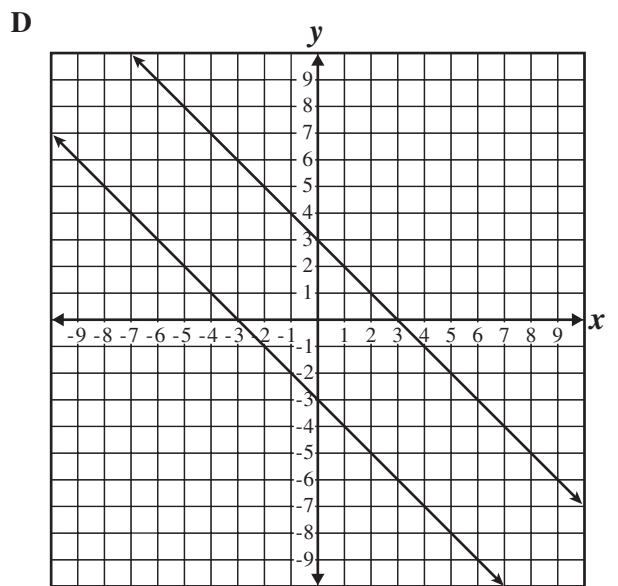
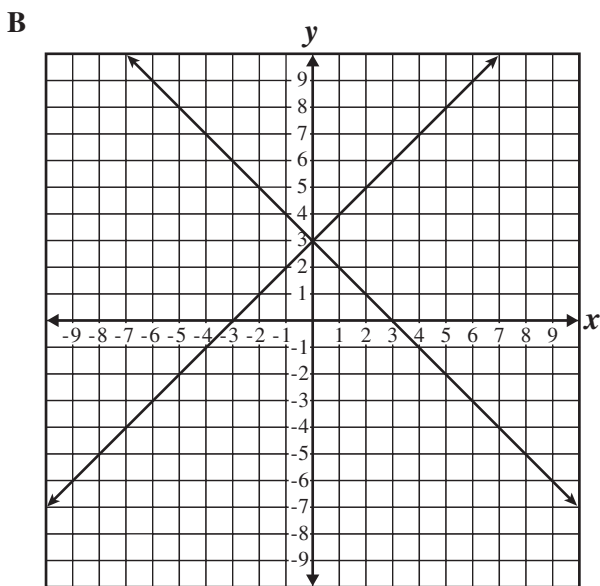
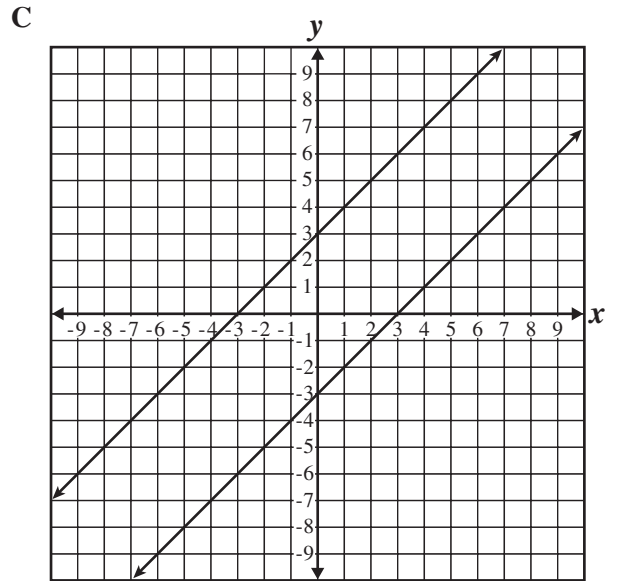
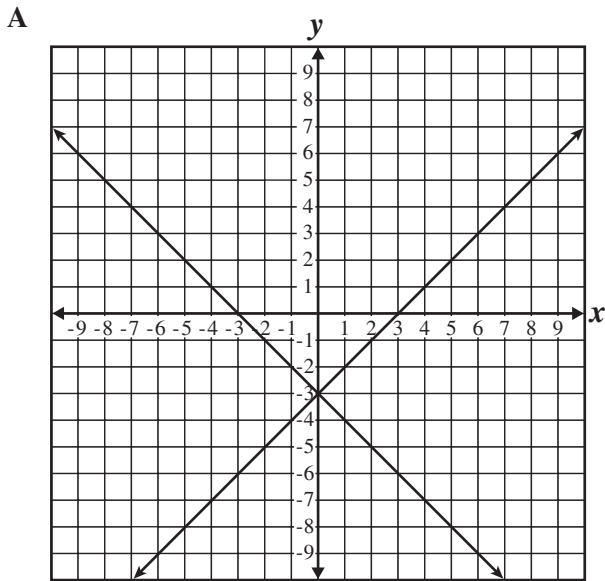
M02649



# Algebra I

178. Which graph represents the system of equations shown below?

$$\begin{aligned} y &= -x + 3 \\ y &= x + 3 \end{aligned}$$



M12449

## Algebra I

179. Simplify.

$$(x^2 - 3x + 1) - (x^2 + 2x + 7)$$

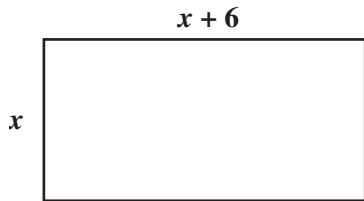
- A  $x - 6$
- B  $-x + 8$
- C  $-5x - 6$
- D  $2x^2 - x + 8$

M03355

182. Mr. Jacobs can correct 150 quizzes in 50 minutes. His student aide can correct 150 quizzes in 75 minutes. Working together, how many minutes will it take them to correct 150 quizzes?

- A 30
- B 60
- C 63
- D 125

M03000



180. The length of the rectangle above is 6 units longer than the width. Which expression could be used to represent the area of the rectangle?

- A  $x^2 + 6x$
- B  $x^2 - 36$
- C  $x^2 + 6x + 6$
- D  $x^2 + 12x + 36$

M00402

183. Ricardo runs 10 miles each Saturday. If he doubles his usual speed, he can run the 10 miles in one hour less than his usual time. What is his usual speed?

- A 2 miles per hour
- B 3 miles per hour
- C 4 miles per hour
- D 5 miles per hour

M02561

181. Simplify.

$$\frac{4x^3 + 2x^2 - 8x}{2x}$$

- A  $2x^2 + x - 4$
- B  $4x^2 + 2x - 8$
- C  $2x^2 + 2x^2 - 8x$
- D  $8x^4 + 4x^3 - 16x^2$

M03354

184. Yoshi has exactly one dollar in dimes (10 cents) and nickels (5 cents). If Yoshi has twice as many dimes as nickels, how many nickels does she have?

- A 4
- B 8
- C 12
- D 15

M02410