

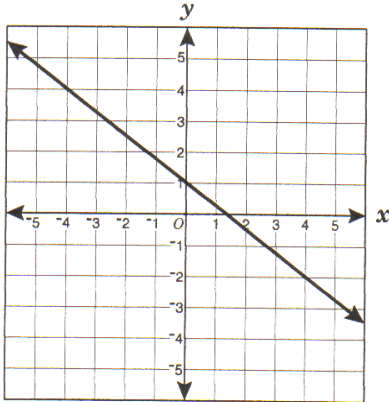
## SOL Mini-Challenge

## Equations and Inequalities A.6, A.7d

Read and solve each question.

1.

The graph of  $y = -\frac{3}{4}x + 1$  is shown.



If the line in the graph is shifted up 2 units, which is the equation of the new line?

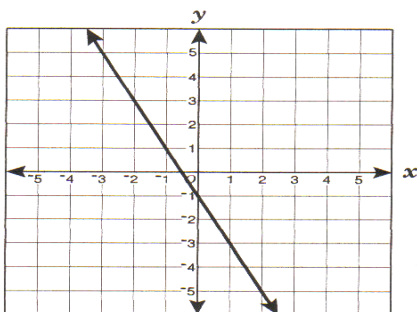
A  $y = \frac{3}{4}x + 3$

B  $y = \frac{3}{4}x + 2$

C  $y = -\frac{3}{4}x + 2$

D  $y = -\frac{3}{4}x + 3$

2.



Which best represents the equation of the line shown?

F.  $y = 2x + 1$

G.  $y = 2x - 1$

H.  $y = -2x + 1$

J.  $y = -2x - 1$

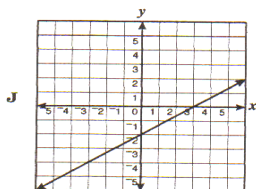
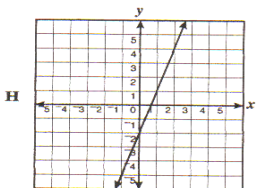
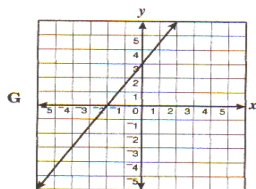
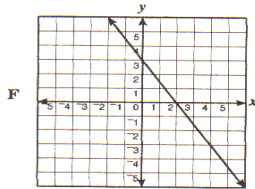
**SOL Mini-Challenge—continued**

3. Which is an equation of a line that has a slope of  $-\frac{1}{2}$  and contains the point (2, 3)?

- A.  $y = 2x - \frac{1}{2}$
- B.  $y = -\frac{x}{2} + 4$
- C.  $y = \frac{x}{2} + 3$
- D.  $y = 3x + 2$

4.

**Which is the graph of a line that appears to have a slope of 3 and y-intercept -2?**



**SOL Mini-Challenge—continued**

5. Which is an equation for the line that contains the points  $(-3, 5)$  and  $(1, -3)$ ?
- A.  $y = -x + 2$
  - B.  $y = -2x - 1$
  - C.  $y = -\frac{1}{2}x - \frac{3}{2}$
  - D.  $y = \frac{3}{2}x - \frac{9}{2}$
6. What are the  $x$  and  $y$  intercepts for the line  $2x + 4y = -8$ ?
- F.  $(2, 0)$  and  $(0, 4)$
  - G.  $(-4, 0)$  and  $(0, -2)$
  - H.  $(4, 0)$  and  $(0, 2)$
  - J.  $(-4, -2)$  and  $(4, 2)$
7. Which is an equation for the line containing points  $(0, 0)$  and  $(6, -4)$ ?
- A.  $y = 0$
  - B.  $x = 0$
  - C.  $y = \frac{2}{3}x$
  - D.  $y = -\frac{2}{3}x$
8. Which is an equation for the line with an undefined slope and containing the point  $(4, 2)$ ?
- F.  $x = 4$
  - G.  $y = 2$
  - H.  $y = 4x$
  - J.  $y = \frac{1}{2}x$
9. Which of the following equations has an  $x$ -intercept of 8?
- A.  $4x + 3y = 24$
  - B.  $8x - 2y = 18$
  - C.  $3x + 4y = 24$
  - D.  $2x + 6y = 18$
10. Which is an equation for the line containing the points  $(8, 6)$  and  $(3, 6)$ ?
- F.  $x = 6$
  - G.  $y = 6$
  - H.  $y = -\frac{2}{3}x + 8$
  - J.  $x = 3$