

## SOL Mini-Challenge

## Expressions and Operations A.2c, A.4c

Read and solve.

- Which is the complete factorization of  $2x^2 + 5x + 3$  ?
  - $(2x + 1)(x + 2)$
  - $(2x + 1)(x + 3)$
  - $(2x + 2)(x + 1)$
  - $(2x + 3)(x + 1)$
  
- If the area of a rectangle can be represented by  $x^2 - 25$ , which could represent its length and width?
  - $x - 5, x - 5$
  - $x - 5, x + 5$
  - $x^2, -25$
  - $5, 5$
  
- The stress distribution on a structure is given by  $s = 2x^2 + 4x - 30$  where  $s$  is stress in pounds per square inch and  $x$  is the distance in feet from a reference point. At what distance is the stress equal to 0?
  - 3 ft
  - 5 ft
  - 6 ft
  - 12 ft
  
- Which is a solution to  $(2x + 3)^2 = 25$  ?
  - 4
  - 2
  - 1
  - 2
  
- Which is the complete factorization of  $a^2 - 9a - 36$  ?
  - $(a - 3)(a + 12)$
  - $(a + 3)(a - 12)$
  - $(a - 4)(a + 9)$
  - $(a + 4)(a - 9)$

**SOL Mini-Challenge continued**

6. Which is the complete factorization of  $x^2 - 64$ ?

- F.  $(x - 8)(x - 8)$
- G.  $(x + 4)(x - 16)$
- H.  $(x + 32)(x - 32)$
- J.  $(x - 8)(x + 8)$

7. Which is the complete factorization of  $4x^2 + 2x - 12$  ?

- A.  $2(x + 2)(2x - 3)$
- B.  $2(x - 2)(2x + 3)$
- C.  $2(2x + 3)(x - 2)$
- D.  $2(2x - 3)(x + 2)$

8. Which is a solution of  $6y^2 - 3y - 9 = 0$  ?

- F.  $\frac{2}{3}$
- G. 1
- H. -1
- J. 2

9. Which is a solution of  $x^2 + 7x + 6 = 0$ ?

- A. -6
- B. -3
- C. 1
- D. 2

10. Which is a solution of  $x^2 - 81 = 0$ ?

- F. -3
- G. 9
- H. 27
- J. 81