

SOL Mini-Challenge

Expressions and Operations A.12, A.14

Read and solve.

1. Which is the complete factorization of $2x^2 + 5x + 3$?

- A. $(2x + 1)(x + 2)$
- B. $(2x + 1)(x + 3)$
- C. $(2x + 2)(x + 1)$
- D. $(2x + 3)(x + 1)$

2. If the area of a rectangle can be represented by $x^2 - 25$, which could represent its length and width?

- F. $x - 5, x - 5$
- G. $x - 5, x + 5$
- H. $x^2, -25$
- J. $5, 5$

3. 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?

- A. 3 ft
- B. 5 ft
- C. 6 ft
- D. 12 ft

4. Which is a solution to $(2x + 3)^2 = 25$?

- F. -4
- G. -2
- H. -1
- J. 2

5. Which is the complete factorization of $a^2 - 9a - 36$?

- A. $(a - 3)(a + 12)$
- B. $(a + 3)(a - 12)$
- C. $(a - 4)(a + 9)$
- D. $(a + 4)(a - 9)$

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