

## SOL Mini-Challenge

## Expressions and Operations A.1

Read and solve.

1. What is the value of  $a(b - c)$  if  $a = 2$ ,  $b = -3$ , and  $c = -2$ ?

- A. 2
- B. -2
- C. -4
- D. -10

2. Each week Jessica earns a 2% bonus on any sales she makes over \$600. She also receives a fixed salary of \$190 per week. If Jessica sold \$1,300 worth of merchandise in a week, which equation could be used to determine her total earnings,  $t$ , for the week?

- F.  $t = (0.02)[1,90 + (1,300 - 600)]$
- G.  $t = 190 + (0.02)(600)$
- H.  $t = (190 + 600)(0.02)$
- J.  $t = 190 + (0.02)(1,300 - 600)$

3. Which expression correctly describes  $x$  divided by the sum of  $y$  and 7?

- A.  $x \div y + 7$
- B.  $\frac{x}{y + 7}$
- C.  $\frac{x}{y} + 7$
- D.  $\frac{y + 7}{x}$

4. Evaluate the expression  $3x(y - 5)$  when  $y = -5$  and  $x = 2$ .

- F. 25
- G. 45
- H. -45
- J. -60

5. Which one of the following expressions represents 15 less than five times a number?

- A.  $5x - 15$
- B.  $5x + 15$
- C.  $15 - 5x$
- D.  $15 + 5x$

6. What is the value of  $6a^3 + 5a^2 - 2(b + 3)$  if  $a = 4$  and  $b = -2$ ?

- F. 42
- G. 110
- H. 462
- J. 14,222

7. Which one of the following expressions represents the product of six and some number?

- A.  $6 + x$
- B.  $x / 6$
- C.  $6 - x$
- D.  $6x$