

**A.SSE.A.2: Factoring Polynomials 2**

- 1 When factored completely,  $x^3 - 13x^2 - 30x$  is
  - 1)  $x(x + 3)(x - 10)$
  - 2)  $x(x - 3)(x - 10)$
  - 3)  $x(x + 2)(x - 15)$
  - 4)  $x(x - 2)(x + 15)$
  
- 2 Factored completely, the expression  $3x^3 - 33x^2 + 90x$  is equivalent to
  - 1)  $3x(x^2 - 33x + 90)$
  - 2)  $3x(x^2 - 11x + 30)$
  - 3)  $3x(x + 5)(x + 6)$
  - 4)  $3x(x - 5)(x - 6)$
  
- 3 Factored completely, the expression  $6x - x^3 - x^2$  is equivalent to
  - 1)  $x(x + 3)(x - 2)$
  - 2)  $x(x - 3)(x + 2)$
  - 3)  $-x(x - 3)(x + 2)$
  - 4)  $-x(x + 3)(x - 2)$
  
- 4 Which expression is equivalent to  $x^4 - 12x^2 + 36$ ?
  - 1)  $(x^2 - 6)(x^2 - 6)$
  - 2)  $(x^2 + 6)(x^2 + 6)$
  - 3)  $(6 - x^2)(6 + x^2)$
  - 4)  $(x^2 + 6)(x^2 - 6)$
  
- 5 Factor:  $x^3 + 8x^2 + 7x$
  
- 6 Factor:  $a^3 - 3a^2 - 10a$
  
- 7 Factor completely:  $x^3 - x^2 - 6x$
  
- 8 Factor completely:  $5x^3 - 20x^2 - 60x$

**A.SSE.A.2: Factoring Polynomials 2**  
**Answer Section**

1 ANS: 3 REF: 011612ai

2 ANS: 4

$$3x^3 - 33x^2 + 90x = 3x(x^2 - 11x + 30) = 3x(x - 5)(x - 6)$$

REF: 061227ia

3 ANS: 4

$$6x - x^3 - x^2 = -x(x^2 + x - 6) = -x(x + 3)(x - 2)$$

REF: fall0917a2

4 ANS: 1 REF: 081415ai

5 ANS:

$$x(x + 7)(x + 1)$$

REF: 019105al

6 ANS:

$$a(a - 5)(a + 2)$$

REF: 069903al

7 ANS:

$$x(x - 3)(x + 2)$$

REF: 018912siii

8 ANS:

$$5x^3 - 20x^2 - 60x$$

$$5x(x^2 - 4x - 12)$$

$$5x(x + 2)(x - 6)$$

REF: 011332ia