

## Lesson 9-7: Factoring Special Cases

### Part 2: Factoring the Difference of Squares

1. fall0706ia, P.I. A.A.19

The expression  $x^2 - 16$  is equivalent to

- [A]  $(x+8)(x-8)$       [B]  $(x-2)(x+8)$   
[C]  $(x+4)(x-4)$       [D]  $(x+2)(x-8)$

2. 010414a, P.I. A.A.19

What is a common factor of  $x^2 - 9$  and  $x^2 - 5x + 6$ ?

- [A]  $x - 3$       [B]  $x + 3$   
[C]  $x^2$       [D]  $x - 2$

3. 010105a, P.I. A.A.19

One of the factors of  $4x^2 - 9$  is

- [A]  $(4x - 3)$       [B]  $(x + 3)$   
[C]  $(2x + 3)$       [D]  $(x - 3)$

4. 080711a, P.I. A.A.19

One factor of the expression  $x^2y^2 - 16$  is

- [A]  $xy - 8$       [B]  $x^2 + 8$   
[C]  $xy - 4$       [D]  $x^2 - 4$

5. 010201a, P.I. A.A.19

Expressed in factored form, the binomial  $4a^2 - 9b^2$  is equivalent to

- [A]  $(2a - 3b)(2a - 3b)$   
[B]  $(4a - 3b)(a + 3b)$       [C]  $(2a - 9b)(2a + b)$   
[D]  $(2a + 3b)(2a - 3b)$

6. 060109a, P.I. A2.A.7

Factor completely:  $3x^2 - 27$

- [A]  $3(x - 3)^2$       [B]  $3(x + 3)(x - 3)$   
[C]  $3(x^2 - 27)$       [D]  $(3x + 3)(x - 9)$

7. 080103a, P.I. A2.A.7

Written in simplest factored form, the binomial  $2x^2 - 50$  can be expressed as

- [A]  $2(x - 5)(x - 5)$       [B]  $(x - 5)(x + 5)$   
[C]  $2x(x - 50)$       [D]  $2(x - 5)(x + 5)$

8. 080533a, P.I. A2.A.7

Factor completely:  $5n^2 - 80$

9. 080434a, P.I. A2.A.7

Factor completely:  $3ax^2 - 27a$

[1] C

[2] A

[3] C

[4] C

[5] D

[6] B

[7] D

[2]  $5(n + 4)(n - 4)$ , and appropriate work is shown.

[1] Appropriate work is shown, but one factoring error is made or the expression is not simplified completely.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[8] incorrect procedure.

[2]  $3a(x - 3)(x + 3)$ , and appropriate work is shown.

[1] Appropriate work is shown, but one factoring error is made, or the expression is not factored completely.

or [1]  $3a(x - 3)(x + 3)$ , but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[9] incorrect procedure.