

A.A.19: Identify and factor the difference of two perfect squares.

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

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

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

2. 080902ia, P.I. A.A.19

Which expression is equivalent to $9x^2 - 16$?

- [A] $(3x + 4)(3x - 4)$ [B] $(3x - 8)(3x - 8)$
[C] $(3x - 4)(3x - 4)$ [D] $(3x + 8)(3x - 8)$

3. 010909ia, P.I. A.A.19

The expression $9x^2 - 100$ is equivalent to

- [A] $(3x - 100)(3x - 1)$ [B] $(9x - 100)(x + 1)$
[C] $(9x - 10)(x + 10)$
[D] $(3x - 10)(3x + 10)$

4. 010201a, P.I. A.A.19

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

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

5. 060804ia, P.I. A.A.19

Factored, the expression $16x^2 - 25y^2$ is equivalent to

- [A] $(4x - 5y)(4x + 5y)$
[B] $(8x - 5y)(8x - 5y)$
[C] $(8x - 5y)(8x + 5y)$
[D] $(4x - 5y)(4x - 5y)$

6. 010105a, P.I. A.A.19

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

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

7. 080711a, P.I. A.A.19

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

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

8. 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] $x - 2$

9. 060109a, P.I. A.A.19

Factor completely: $3x^2 - 27$

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

10. 080103a, P.I. A.A.19

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

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

11. 080434a, P.I. A.A.19

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

12. 080533a, P.I. A.A.19

Factor completely: $5n^2 - 80$

13. 060932ia, P.I. A.A.19

Factor completely: $4x^3 - 36x$

A.A.19: Identify and factor the difference of two perfect squares.

[1] C

[2] A

[3] D

[4] C

[5] A

[6] B

[7] D

[8] B

[9] B

[10] C

[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

[11] incorrect procedure.

[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

[12] incorrect procedure.

[2] $4x(x - 3)(x + 3)$, and appropriate work is shown.

[1] Appropriate work is shown, but one computational or factoring error is made.

or [1] Appropriate work is shown, but one conceptual error is made, such as leaving the answer as $4x(x^2 - 9)$.

or [1] $4x(x - 3)(x + 3)$, 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

[13] incorrect procedure.