Regents Exam Questions by Topic
QUADRATICS: Factoring the Difference of Perfect Squares-A
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NAME:_____

1. 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] $(2a - 9b)(2a + b)$

[C] $(2a + 3b)(2a - 3b)$

[D] $(4a - 3b)(a + 3b)$

2. 010105a, P.I. A.A.19
One of the factors of $4x^2 - 9$ is

[A] $(x + 3)$ [B] $(x - 3)$

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

3. 080711a, P.I. A.A.19
One factor of the expression $x^2y^2 - 16$ is

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

[C] $xy - 8$ [D] $xy - 4$

4. 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] $x - 2$

5. 060109a, P.I. A.A.19
Factor completely: $3x^2 - 27$

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

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

6. 080103a, P.I. A.A.19
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] $2(x- 5)(x - 5)$ [D] $2x(x - 50)$

7. 080533a, P.I. A.A.19
Factor completely: $5n^2 - 80$

8. 080434a, P.I. A.A.19
Factor completely: $3ax^2 - 27a$

[1] C

[2] C

[3] D

[4] B

[5] D

[6] A

[7] [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 incorrect procedure.

[8] [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 incorrect procedure.