

Section 11-8: Factoring a Polynomial Completely

1. 060623a, P.I. A.A.20
Factored completely, the expression $2y^2 + 12y - 54$ is equivalent to
[A] $(2y + 6)(y - 9)$ [B] $(y + 6)(2y - 9)$
[C] $2(y - 3)(y - 9)$ [D] $2(y + 9)(y - 3)$
2. 060535a, P.I. A.A.20
Factor completely: $3x^2 + 15x - 42$
3. 060109a, P.I. A2.A.7
Factor completely: $3x^2 - 27$
[A] $(3x + 3)(x - 9)$ [B] $3(x^2 - 27)$
[C] $3(x + 3)(x - 3)$ [D] $3(x - 3)^2$
4. 080103a, P.I. A2.A.7
Written in simplest factored form, the binomial $2x^2 - 50$ can be expressed as
[A] $(x - 5)(x + 5)$ [B] $2(x - 5)(x + 5)$
[C] $2x(x - 50)$ [D] $2(x - 5)(x - 5)$
5. 080533a, P.I. A2.A.7
Factor completely: $5n^2 - 80$
6. 080434a, P.I. A2.A.7
Factor completely: $3ax^2 - 27a$

[1] D

[2] $3(x + 7)(x - 2)$, and appropriate work is shown.

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

or [1] A conceptual error is made, such as incomplete factoring.

or [1] $3(x + 7)(x - 2)$, 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

[2] incorrect procedure.

[3] C

[4] B

[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

[5] 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

[6] incorrect procedure.