

NAME: _____

P.I. A2.A.7: Factor polynomial expressions completely, using any combination of the following techniques: common factor extraction, difference of two perfect squares, quadratic trinomials

Factor:

1. $10x^2 + 10 + 29x$
[A] $(5x+2)(2x-5)$ [B] $(5x+2)(2x+5)$
[C] $(5x-2)(2x+5)$ [D] $(5x-2)(2x-5)$
2. $4x^2 + 12x + 9$
[A] $(2x-3)^2$ [B] $(2x+3)(2x-3)$
[C] $(2x-9)(2x+1)$ [D] $(2x+3)^2$
3. $6x^2 + 10 + 19x$
[A] $(2x-5)(3x-2)$ [B] $(2x+5)(3x-2)$
[C] $(2x+5)(3x+2)$ [D] $(2x-5)(3x+2)$
4. $15x^2 + 20 + 37x$
[A] $(5x+4)(3x-5)$ [B] $(5x-4)(3x+5)$
[C] $(5x+4)(3x+5)$ [D] $(5x-4)(3x-5)$
5. $4e^2 - 20e + 25$
[A] $(2e-25)(2e+1)$ [B] $(2e+5)^2$
[C] $(2e-5)^2$ [D] $(2e-5)(2e+5)$
6. $12x^2 + 2 + 11x$
[A] $(3x-2)(4x-1)$ [B] $(3x-2)(4x+1)$
[C] $(3x+2)(4x-1)$ [D] $(3x+2)(4x+1)$
7. $25z^2 - 30z + 9$
[A] $(5z-3)(5z+3)$ [B] $(5z-9)(5z+1)$
[C] $(5z+3)^2$ [D] $(5z-3)^2$
8. $12x^2 + 5 - 19x$
[A] $(4x+5)(3x-1)$ [B] $(4x-5)(3x-1)$
[C] $(4x-5)(3x+1)$ [D] $(4x+5)(3x+1)$
9. $16x^2 + 3 - 16x$
[A] $(4x+3)(4x+1)$ [B] $(4x-3)(4x+1)$
[C] $(4x-3)(4x-1)$ [D] $(4x+3)(4x-1)$
10. $16d^2 + 40d + 25$
[A] $(4d-25)(4d+1)$ [B] $(4d-5)^2$
[C] $(4d+5)^2$ [D] $(4d+5)(4d-5)$
11. Find a polynomial that has $x+3$ as one factor and another factor in the form $ax^2 + bx + c$. Divide to prove that your product is correct.