

Chapter 7
Form E

Choose the correct answer to each problem.

For problems 1 – 13, factor completely or state that the polynomial is prime.

1. $x^2 + 24x + 144$
 - a. $(x-12)^2$
 - b. $(x-12)(x+12)$
 - c. $(x+12)^2$
 - d. Prime
2. $x^2 - 3x - 28$
 - a. $(x-14)(x+2)$
 - b. $(x+4)(x-7)$
 - c. $(x-4)(x+7)$
 - d. Prime
3. $8x^3 - 27$
 - a. $(2x-3)^3$
 - b. $(2x+3)(2x^2-9)$
 - c. $(2x-3)(4x^2+6x+9)$
 - d. $(2x-3)(4x^2-6x+9)$
4. $10x^2 - 2x - 12$
 - a. $(5x-6)(x+1)$
 - b. $(2x+3)(5x+4)$
 - c. $(2x-3)(5x+4)$
 - d. Prime
5. $36x^2 + 12xy + y^2$
 - a. $(6x-y)^2$
 - b. $(6x+y)^2$
 - c. $(36x+y)(x+y)$
 - d. $(18x+y)(2x+y)$
6. $x^2 - 9$
 - a. $(x+3)^2$
 - b. $(x-3)^2$
 - c. $(x+3)(x-3)$
 - d. Prime
7. $2x^3y - 30x^2y + 108xy$
 - a. $2xy(x-9)(x-6)$
 - b. $2x(x-9y)(x-6y)$
 - c. $2xy(x+9)(x+6)$
 - d. $2(x^2-9y)(x-6y)$
8. $8x^2y^2 - 24xy^3 + 18y^4$
 - a. $2y^2(2x-3y)^2$
 - b. $2y^2(2x-3y)(2x+3y)$
 - c. $2xy(4x^2-12y+9y^2)$
 - d. $2xy^2(4x-12y+9y^2)$
9. $y^3 + 4y^2 - 25y - 100$
 - a. $y^2(y+4) - 5(5y+20)$
 - b. $(y+5)^2(y+4)$
 - c. $(y+5)(y-5)(y+4)$
 - d. $(y+4)^2(y-5)$
10. $64x^2y^2 - 16xy$
 - a. $(8xy-4x)(8xy+4y)$
 - b. $16xy(4xy-1)$
 - c. $16xy(-4xy)$
 - d. $(8xy-4x)^2$

