

HW22: Factoring Review

Factor.

1. $125x^3 - 27$

2. $4x^2 - 13x - 12$

3. $9x^5 - 36x$

4. $2x^2 - xy - 6y^2$

5. $20y^4 - 80y^2$

6. $25x^2 - 90x + 81$

7. $64x^3 + 343$

8. $x^8 - 16$

9. $9x^8 - 25$

10. $27p^3 - 8q^3$

11. $y^3 + 4y^2 - 16y - 64$

12. $x^2 - 5x + 6$

Answers

1. $(5x - 3)(25x^2 + 15x + 9)$

2. $(x - 4)(4x + 3)$

3. $9x(x^2 + 2)(x^2 - 2)$

4. $(x - 2y)(2x + 3y)$

5. $20y^2(y - 2)(y + 2)$

6. $(5x - 9)^2$

7. $(4x + 7)(16x^2 - 28x + 49)$

8. $(x^2 + 2)(x^2 - 2)(x^4 + 4)$

9. $(3x^4 - 5)(3x^4 + 5)$

10. $(3p - 2q)(9p^2 + 6pq + 4q^2)$

11. $(y + 4)(y + 4)(y - 4)$

12. $(x - 3)(x - 2)$