

Precalculus Unit 2 – 2.2 Notes

Factoring

Factor each of the following functions completely.

1. $f(x) = 15x^3 + 3x^2$

7. $f(x) = 2x^3 - 3x^2 - 8x + 12$ (grouping)

2. $f(x) = 4x^4 - 64x^2$

8. $g(p) = 10x^3 + 14x^2 - 12x$

3. $g(x) = x^2 - 2x - 15$

9. $w(t) = t^3 + 125$ (sum of cubes)

4. $r(t) = 3t^2 + t - 2$

10. $f(x) = 4x^2 - 49$

5. $h(t) = 4t^2 + 5t - 3$

11. $f(x) = 2x^{\frac{4}{3}} + 3x^{\frac{1}{3}} + x^{\frac{-2}{3}}$

6. $f(x) = 8x^3 - 27$ (difference of cubes)

12. $g(x) = 4(2x^2 + 1)^3(x + 2)^3 + 12x(x + 2)^4(2x^2 + 1)^2$