

DIRECTIONS: Find (a) the domain of each function and (b) its zeros, if any.

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

2. $f(m) = (y^3 - 8)(y + 2)^{-3}$

3. $g(y) = \frac{4y^2+15y-4}{(2y-1)^2}$

4. $h(t) = \frac{t^3+4t^2-t-4}{t^3-t^2+t-1}$

DIRECTIONS: Simplify.

5. $\frac{t^4-1}{t^3+t^2+t+1}$

6. $\frac{x^3-x^2y+xy^2-y^3}{x^4-y^4}$

7. $\frac{u^4-v^4}{u^4+2u^2v^2+v^4}$

8. $\frac{ax-ay+by-bx}{ax-ay-by+bx}$

9. $\frac{3x^3}{12x^2+9x}$

10. $\frac{x^2-3x+2}{x^2+5x-6}$

11. $\frac{x^2-2x-3}{x^2-7x+12}$