

Chapter 1 Extra Review

1) Graph $f(x) = -2 + |x - 3|$. Make sure to label 3 points on your grid.

State the domain and range in interval notation.

2) Graph $f(x) = \begin{cases} x + 2 & \text{if } x < -3 \\ \sqrt{1 - x} & \text{if } x = -3 \\ -x^2 + 8 & \text{if } x > -3 \end{cases}$

3) Given $f(x) = x^2 + 3x - 10$ and $g(x) = x^3 - 8$,

find the domain of $\left(\frac{g}{f}\right)$ in interval notation.

4) Determine if $f(x) = \frac{3x^3 - x}{4x^4 + x^2}$ is even, odd or neither.

Justify your answer mathematically.

5) State the domain in set notation; $h(x) = \frac{\sqrt{x^2 - 16}}{x^2 + 3x + 6}$

6) Find the inverse of $f(x) = \frac{5}{-3x - 2}$

Study: Verifying an Inverse, Increasing, Decreasing, Constant, Relative Max (calculator), Relative Min (calculator), Difference Quotient, Graphing Greatest Integer Function, Composite Functions, Domain of Composite functions, and transformations.