

Diagnostic Exam

1. Find the equation of the line through the points $(1, 2)$ and $(4, 5)$.

2. Solve for x : $|x - 4| < 3$

3. Given $f(x) = 2x^2 - 1$ find

$$\frac{f(x+h) - f(x)}{h}$$

4. Determine the domain of the function

$$f(x) = \frac{\sqrt{x} + 1}{x^2 - 16}$$