

Difference Quotients Video Lecture

Section - Not in Textbook

Course Learning Objective:

- 1) Demonstrate appropriate manipulation of function notation.**
- 2) Demonstrate appropriate manipulation of rational expressions.**

Weekly Learning Objectives:

- 1) Evaluate and simplify function notation.**
- 2) Find a simplified difference quotient.**

Difference Quotients

Difference Quotient:
$$\frac{f(a+h) - f(a)}{h}$$

Find the difference quotient of the following functions:

$$f(x) = \frac{2}{x}$$

$$f(x) = \frac{3}{x^2}$$

$$f(x) = 2x^2 - 3x$$

$$f(x) = x^3 - 2x + 1$$