

Calculus I

Section 2.2 - Difference Quotients

Find $\frac{f(x+h)-f(x)}{h}$ using each of the following functions.

$$1. \ f(x) = 3x - 4$$

$$2. \ f(x) = -5x + 2$$

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

$$4. \ f(x) = 2x^2 + 7$$

$$5. \ f(x) = x^2 - 2x + 4$$

$$6. \ f(x) = 3x - 4x^2$$

$$7. \ f(x) = \frac{4}{x}$$

$$8. \ f(x) = \frac{3}{x^2}$$

$$9. \ f(x) = \sqrt{2x+1}$$

$$10. \ f(x) = \sqrt{8-3x}$$