1.1 Practice Activity

Practice 1-1-1

Determine whether the relation is a function.

a) {(a,b), (c,d), (a,c)}

b) {(a,b), (b,c), (c,c)}

Practice 1-2-1

Evaluate a function given by an algebraic expression.

- Find $f(-5)$ if $f(x) = -3x^2 + 6$

Practice 1-2-2

Evaluate a function given by an algebraic expression.

Find $f(3)$ if $f(x) = 2x^2 - 3x + 9$

Practice 1-3-1

Find the domain of the following functions, then use set builder notation and interval notation represent its domain.

- $F(x) = \sqrt{5x - 7}$

Set builder notation: _____.

Interval notation: _____.

Practice 1-3-2

Find the domain of the following functions, then use set builder notation and interval notation represent its domain.

- $F(x) = \frac{2x}{x+3}$

Set builder notation: _____.

Interval notation: _____.

Practice 1-3-3

Find the domain of the following functions, then use set builder notation and interval notation represent its domain.

- $F(x) = \frac{\sqrt{2x}}{x-5}$

Set builder notation: _____.

Interval notation: _____.

Practice 1-4-1

Given functions $f(x) = 2x - 1; g(x) = x - 3$

Find $(f - g)(x)$ and its domain.

Practice 1-4-2

Given functions $f(x) = 2x - 1; g(x) = x - 3$

Find $\left(\frac{f}{g}\right)(x)$ and its domain.

Practice 1-4-3

Given functions $f(x) = 3x^2 - 7; g(x) = x + 3$

Find $(f \cdot g)(-1)$.