

## Review Exercise Set 11

Exercise 1: Translate into a variable expression and then simplify.

A number plus the difference between the number and ten.

Exercise 2: Translate into a variable expression and then simplify.

Ten times the difference between a number and three.

Exercise 3: Translate into a variable expression and then simplify.

Thirteen more than the square of a number added to the difference between the number and seven.

Exercise 4: A board 5 feet long is cut into two unequal lengths. If the length of the shorter board is represented by the variable  $L$ , then what is the length of the longer board expressed in terms of the length of the shorter board?

Exercise 5: The length of a rectangle is five less than twice the width ( $W$ ). Express the length of the rectangle in terms of the width.

## Review Exercise Set 11 Answer Key

Exercise 1: Translate into a variable expression and then simplify.

A number plus the difference between the number and ten.

Let  $x =$  a number

$$\begin{aligned} &x + (x - 10) \\ &= x + x - 10 \\ &= \mathbf{2x - 10} \end{aligned}$$

Exercise 2: Translate into a variable expression and then simplify.

Ten times the difference between a number and three.

Let  $x =$  a number

$$\begin{aligned} &10 * (x - 3) \\ &= \mathbf{10x - 30} \end{aligned}$$

Exercise 3: Translate into a variable expression and then simplify.

Thirteen more than the square of a number added to the difference between the number and seven.

Let  $x =$  a number

$$\begin{aligned} &13 + x^2 + (x - 7) \\ &= 13 + x^2 + x - 7 \\ &= \mathbf{x^2 + x + 6} \end{aligned}$$

Exercise 4: A board 5 feet long is cut into two unequal lengths. If the length of the shorter board is represented by the variable  $L$ , then what is the length of the longer board expressed in terms of the length of the shorter board?

$5 =$  total length

$L =$  length of shorter board

$5 - L =$  length of longer board

Exercise 5: The length of a rectangle is five less than twice the width (W). Express the length of the rectangle in terms of the width.

W = width of rectangle

L = length of rectangle

five less than = - 5

twice the width =  $2w$

$$\mathbf{L = 2W - 5}$$