The following exercises are related to the Python programming language [?].

1. Write a function sumultiply that takes two integer arguments and returns their product. The function should not use the \* or / operators. For example:

```
> sumultiply(11, 13)
143
> sumultiply(5, 123)
615
```

## **Solution:**

True

2. Write a function **ispalindrome** that takes a string and returns True if the string is a palindrome and example:

```
> ispalindrome("radar")
True
> ispalindrome("radars")
False
```

## **Solution:**

True

3. Write a function newtonsroot that takes a number x and returns its square root correct to six decimal places as calculated by Newton's method. Newton's method is to make an initial (random) guess  $r_0$  at the square root, and to repeatedly improve it as follows:

$$r_{i+1} = r_i - \frac{r_i^2 - x}{2r_i}$$

For example:

```
> newtonsroot(100)
10.0
> newtonsroot(144)
12.0
```

## Solution:

True