```swift
/*:
## Exercise – Basic Arithmetic

 You decide to build a shed and want to know beforehand the area of your yard
   that it will take up. Create two constants, `width` and `height`, with
   values of 10 and 20, respectively. Create an `area` constant that is the
   result of multiplying the two previous constants together, and print out the
   result.
 */
let width = 10
let height = 20
let area = width * height
print(area)

//:  You decide that you'll divide your shed into two rooms. You want to know
 if dividing it equally will leave enough room for some of your larger storage
 items. Create a `roomArea` constant that is the result of dividing `area` in
 half. Print out the result.
let roomArea = area/2
print(roomArea)

//:  Create a `perimeter` constant whose value equals `width` plus `width`
 plus `height` plus `height`, then print out the result.
let perimeter = width+width+height+height
print(perimeter)

//:  Print what you would expect the result of integer division of 10 divided
 by 3 to be. Create a constant, `integerDivisionResult` that is the result of
 10 divided by 3, and print the value.

let integerDivisionResult = 10/3
print(integerDivisionResult)
//:  Now create two constants, `double10` and `double3`, set to 10 and 3, and
 declare their types as `Double` values. Declare a final constant
 `divisionResult` equal to the result of `double10` divided by `double3`.
 Print the value of `divisionResult`. How does this differ from the value when
 using integer division?
let double10: Double = 10.00
let double3: Double = 3.00
let divisionResult = double10/double3
print(divisionResult)

/*:
 Given the value pi (3.1415927), create a `radius` constant with a value of
   5.0, then calculate the diameter and circumference of the circle using the
   following equations, and print the results:

 *diameter = 2 * radius*

 *circumference = 2 * pi * radius.*
 */
```

```
let pi = 3.1415927
let radius = 5.0
let diameter = 2*radius
let circumference = 2*pi*radius
print(diameter)
print(circumference)


//:  Create an integer constant. Using the modulus operator, set its value to
 the remainder of 12 divided by 5.
let remainder = 12 % 5


//:  Create two integer constants, `even` and `odd` and set them to any even
 integer and any odd integer, respectively. For each, print the remainder of
 dividing the value by 2. Looking at the results, how do you think you could
 use the remainder operator to determine if an integer is even or odd?
let even = 6
let odd = 3
let maybeEven = even % 2
let maybeOdd = odd % 2
print("You can use the remainder function to test if it is even or odd by
 identifying if the number has a remainder after being divided by 2 or not.")

/*:
page 1 of 8  |  [Next: App Exercise - Fitness Calculations](@next)
 */
```