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Homework 1

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Question 1

    a) "numeric"
    b) An "integer" vector with the values 2, 4, 4, 6
    c) The number 0 is returned
    d) A two by two matrix
    e) 10

NOTE: *Per* Question 1c the absolute value of the numeric type returned was non-zero yet smaller than the machine epsilon as reported by my 64bit install of R. Technically a non-zero return.

Question 2

The sum of x^2 from x = 1 to x = 1000 can be represented in R as sum(seq(1, 1000)^2). This is equivalent in expression to the sum of the square of the numbers from 1 to 1000. Therefore sum(seq(1, 1000)^2) == sum(seq(1, 1000)^2) is TRUE.

    a) True

Question 3

```
a) [ 2   4   6   8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 ]
b) [ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 ]
c) [ -0.98999250  0.96017029 -0.91113026  0.84385396 -0.75968791
   0.66031671 -0.54772926  0.42417901 -0.29213881  0.15425145
   -0.01327675 27.71281603 31.24811456 34.92213953 38.72983781
   42.66667146 46.72853567 50.91169396 55.21272615 59.62848609]
```