Exercise 1

Give an example of each of the following:

- (a) A natural number
- (b) An integer that is not a natural number
- (c) A rational number that is not an integer
- (d) An irrational number

Solution

A natural number is what you naturally use to count (1, 2, 3, ...).

69 is an example

The integers consist of all the natural numbers, zero, and their negatives $(\ldots, -3, -2, -1, 0, 1, 2, 3, \ldots)$.

-999 is an example

A rational number is a ratio of integers.

$$\frac{1}{2}$$
 is an example.

An irrational number is a number that goes on forever and can't be represented by a ratio.

$$\sqrt{3} = 1.73205...$$
 is an example.