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# Types of Numbers



- 1 Analyze the statements about the different number types.
- 2 Explain the different types of numbers.
- 3 Place each number in the smallest possible set.
- 4 Identify which numbers don't belong to the given number type.
- 5 Assign each number to its correct number type.
- 6 Decide to which number type the number belongs.
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.




The complete package, including all problems, hints, answers, and detailed answer explanations is available for all [sofatutor.com](https://www.sofatutor.com) subscribers.



## Analyze the statements about the different number types.

Highlight all the numbers belonging to the corresponding number system.

 correct

- 1 We start with the natural numbers such as  $\underline{11}$ ,  $\underline{21}$  and  $\underline{-6}$
- 2 The natural numbers, together with  $\underline{-1}$ , form the whole numbers.
- 3 Integers are numbers like  $\underline{-3}$ ,  $\underline{-\frac{2}{3}}$  and  $\underline{-99}$ .
- 4 The rational numbers are fractions such as  $\frac{1}{4}$  or decimals that terminate, like  $\underline{8.1}$ , or repeat, like  $\underline{-2\sqrt{5}}$ .
- 5 Irrational numbers are not repeating decimals nor can they be written as fractions like  $\underline{-\frac{2}{3}}$  or  $\underline{\pi}$ .



## Hints for solving these problems

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of 6

### Analyze the statements about the different number types.

#### Hint #1

Natural numbers are positive. So, if  $a$  is a natural number, then  $a > 0$ .

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#### Hint #2

The number 0, together with the natural numbers form the set of whole numbers.

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#### Hint #3

$\frac{1}{3} = 0.\overline{3}$  is an example of a repeating decimal, and 7.5 is an example of a rational number.

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## Answers and detailed answer explanations for these problems

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of 6

### Analyze the statements about the different number types.

**Answer key:** correct: 1, 2, 5, 7, 8, 9, 12

We start with the **natural** numbers such as 11, 21.  $-6$  is not a natural number.

The natural numbers, together with 0, form the **whole** numbers.  $-1$  is not a whole number.

**Integers** are numbers like  $-3$  and  $-99$ .  $-\frac{2}{3}$  is not an integer.

The **rational** numbers are fractions such as  $\frac{1}{4}$  or decimals that terminate, like 8.1, or repeat.  $-2\sqrt{5}$  is not a rational number.

**Irrational** numbers are not repeating decimals nor can they be written as fractions like  $\pi$ .  $-\frac{2}{3}$  is not an irrational number.