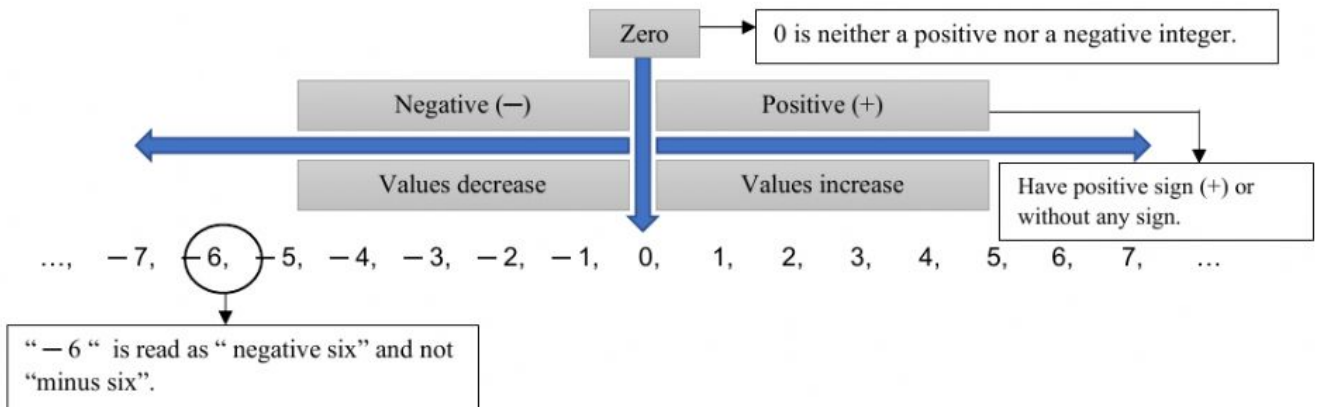# CHAPTER 1 : RATIONAL NUMBERS

1.1 Integers

Positive numbers and negative numbers

- _____ are numbers that are greater than 0.
- _____ are numbers that are less than 0.
- _____ are whole numbers with a _____ or a _____ sign, including _____. For example:

| Zero | → 0 is neither a positive nor a negative integer. |

| Negative (—) | Positive (+) |
| Values decrease | Values increase |

Have positive sign (+) or without any sign.

…,   − 7,   − 6,   − 5,   − 4,   − 3,   − 2,   − 1,   0,   1,   2,   3,   4,   5,   6,   7,   …

" − 6 " is read as " negative six" and not "minus six".

Example 1 : For each of the following situation, represent two opposing changes by using positive numbers or negative numbers.

a)	b)	c)
3450 m / 2000 m	1 °C below 0 °C 80 °C	Left 500 m Right 650 m
+ 3450 m − 2000 m		

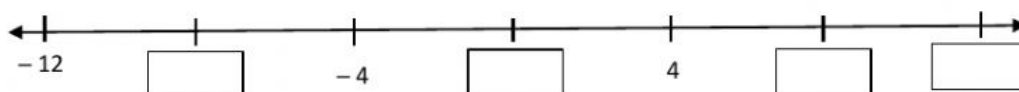### Integers

Example 2 : In the following table, mark '√' for numbers that are integers and mark 'X' for numbers that are non-integers.

a) 15	b) − 5	c) 0.7	d) $2\frac{1}{3}$	e) 102	f) 0
√					

Represent integers on a number line

Example 3 : Complete the following number lines.

| − 12 | ☐ | − 4 | ☐ | 4 | ☐ | ☐ |

Compare and arrange integers in order

Ascending order → arrange from smallest to largest.
→ Ex: $-4, -2, 0, 2, 4$

Descending order → arrange from largest to smallest.
→ Ex: $4, 2, 0, -2, -4$