

Examples

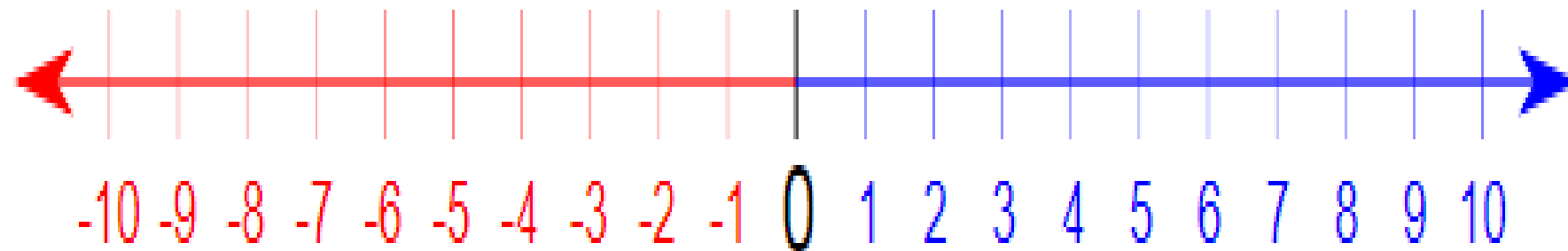
Counting Number : $\{1, 2, 3, 4, \dots\}$ $\nearrow$ Set

Whole Number: if 0 is included

$\{0, 1, 2, 3, 4, \dots\} \rightarrow$ Set Form

Integers

Integers are like whole numbers, but they **also include negative numbers** ... but still no fractions allowed!



So, integers can be negative $\{-1, -2, -3, -4, -5, \dots\}$, positive $\{1, 2, 3, 4, 5, \dots\}$, or zero $\{0\}$

• Integers = $\{ \dots, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, \dots \}$ -

-ve ←

→ +ve

• Negative Integers = $\{ \dots, -5, -4, -3, -2, -1 \}$

↙ Does not include (0)

• Positive Integers = $\{ 1, 2, 3, 4, 5, \dots \}$

• Non-Negative Integers = $\{ 0, 1, 2, 3, 4, 5, \dots \}$ (includes zero, see?)

Non - positive Integers = $\{ \dots, -3, -2, -1, 0 \}$

Example # 1

Which one of the following is not whole Number

(a) $+5$

(b) $+10$

(c) -3

(d) $+8$

$\longleftrightarrow$ Not whole Number
because it is -ve

Example # 2

which one of the following is not an Integer

(A) -10

(C) 8

(b) 2

(d) $\frac{1}{4}$

$\longleftrightarrow$ not integer because it
Fraction

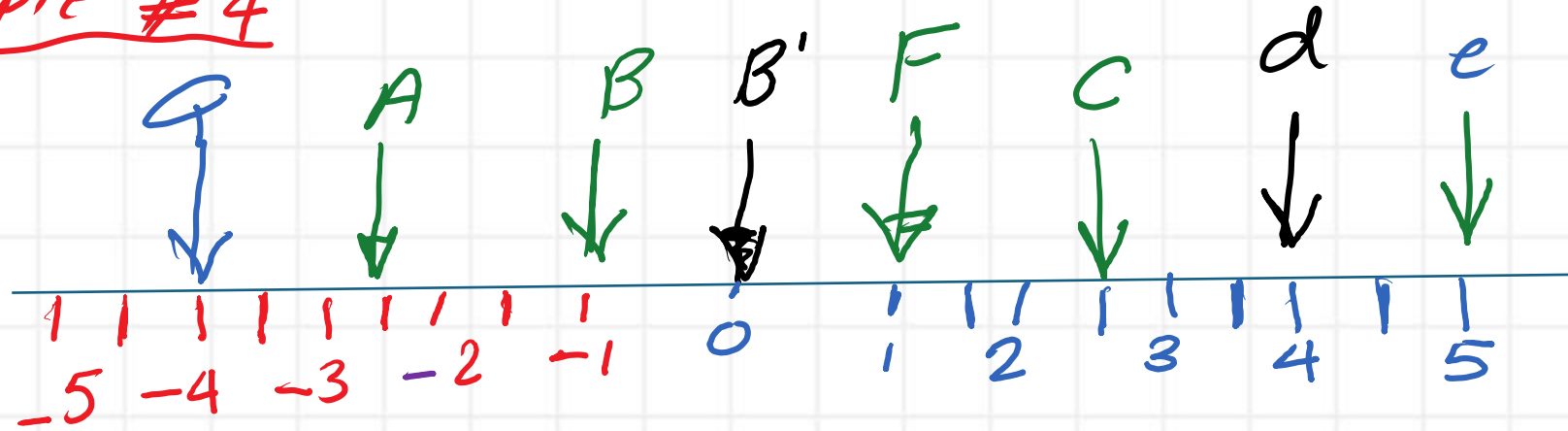
Example # 3

Which of the following correctly describes the set $\{\dots, -5, -4, -3, -2, -1, 0\}$

select one option of the following options:

- Ⓐ The set is -ve whole Number . ✗
- Ⓑ The set is non +ve integers. —————>>> 0
- Ⓒ The set of -ve Integers ✗
- Ⓓ The set of non-negative Integers. ✗

Example #4



From the Figure, How many of the +ve Integers more than the -ve Integers?

(A) 0

(C) 1 $\Rightarrow$ Correct

(B) 3

(d) 4

A: Not integer

C: Not Integer

B' Integer Not +ve
Not -ve

Prepared by Eng. Maged Kamel.

-ve = Φ, B
+ve = F, d, e

Example # 5

Which of the following correctly describes the set $\{\dots, -4, -3, -2, -1, 0, 1, 2, 3, 4\}$

① The set of whole Number < 4 . $\rightarrow 4$ is there

② The set of whole Number ≤ 4 x

③ The set of Integers ≤ 4 . $\rightarrow$ Correct

④ The set of Integers ≥ -4 and ≤ 4 .

$\swarrow$ $\{ -4, -3, -2, -1, 0, 1, 2, 3, 4 \}$ $\nwarrow$ x Set is continuous To infinity -ve

Prepared by Eng.Maged Kamel.