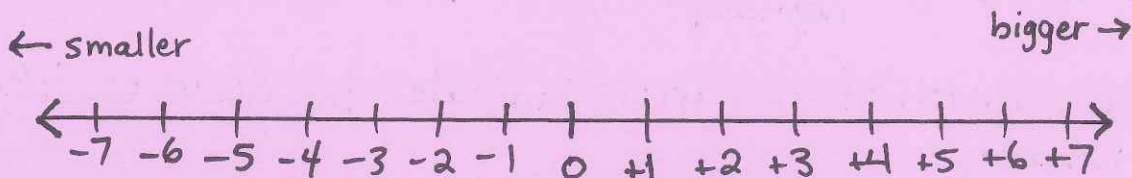


# Introduction to Integers

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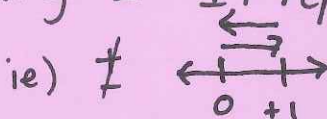
Before we begin, we will need to review some terms:

Integer: Any of the numbers  $\dots, -3, -2, -1, 0, +1, +2, +3, \dots$



Opposite integer: Integers that are the same distance from zero but have opposite signs. Ex)  $+3$  and  $-3$      $-19$  and  $+19$

Zero pair: A pair of integer chips with one chip representing  $+1$  and one chip representing  $-1$ . It represents zero because  $(+1) + (-1) = 0$ .



## Representing Integers

- Using Chips - use 2 different colours. Designate 1 colour to represent positive integers and the other colour to represent negative integers.

eg)  $+3$

$+++$  or  $\cancel{+} \cancel{-} +++$

eg)  $-5$

$-----$  or  $\cancel{+} \cancel{-} -----$

Practice: Model and draw the following values in 2 different ways.

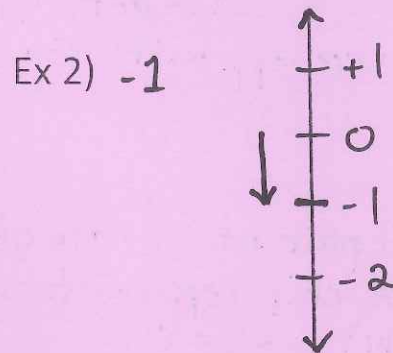
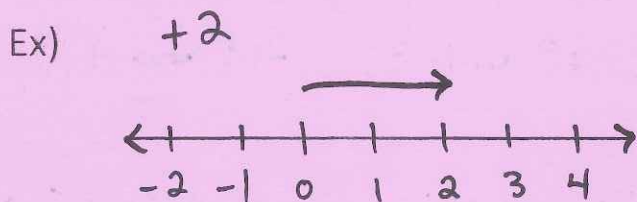
a)  $+11$

b)  $-7$

c)  $+3$

## 2. Using Number Lines

- You can use an arrow on a horizontal ( $\leftrightarrow$ ) or vertical ( $\updownarrow$ ) number line to represent an integer.
- the direction of the arrow indicates the sign of the integer  $\leftarrow$  negative  $\downarrow$   $\rightarrow$  positive  $\uparrow$
- the length of the arrow indicates the value of the numeral.



### Practice

Draw a number line and correctly represent the following integers.

- a) +6 } use a horizontal ( $\leftrightarrow$ ) numberline      c) +3 } use a vertical ( $\updownarrow$ ) numberline  
 b) -8 } use a horizontal ( $\leftrightarrow$ ) numberline      d) -2 } use a vertical ( $\updownarrow$ ) numberline

