

**1 Understanding Integers**

**Integers are numbers that include positive and negative numbers.**

**This is useful for representing real life values**

Write an integer for each statement

- a) \$12 spent      b) drop of 13 °C      c) 35 cm longer      d) 2 floors up

**An Integers Value**

**It is important to know which integers are greater or less than others**

**Working with positive integers**

Complete the statement with <, >, or =

$12 \_ \_ 26$

$15 \_ \_ 8$

$53 \_ \_ 82$

$1026 \_ \_ 113$

**Now we will add in negative values. Negative values are always less than positive and the larger a negative number the smaller it's value.**

Complete the statement with <, >, or =

Ex.

$-12 \_ \_ -8$

$-23 \_ \_ 8$

$0 \_ \_ -15$

Try:

$112 \_ \_ 8$

$-32 \_ \_ -48$

$-32 \_ \_ 22$

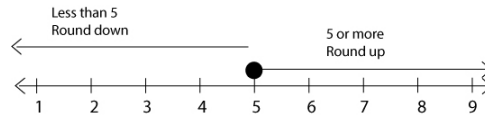
$6 \_ \_ -8$

$112 \_ \_ 8$

$112 \_ \_ 8$

## Rounding integers

To Round, look to the left of the place you are rounding to. If the number is less than 5, then truncate it. If the number is 5 or more, then round up.




### Rounding the integer values to the nearest ones, tens, or hundreds

Round to the nearest one

2.45

8.53

124.8

Round to the nearest ten

2546

1383

5895

Round to the nearest hundred

2375

4518

7154

9247

## Adding integers

Both positive

Both negative

The first is negative and the second is positive

The first is positive and the second is negative

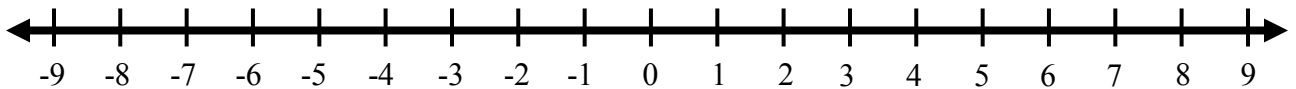
a)  $(+3) + (+4) =$

b)  $(-3) + (-4) =$

c)  $(-3) + (+4) =$

d)  $(+3) + (-4) =$

Numberline



Note: if a number did not state if it is POSITIVE OR NEGATIVE,

Example:  $(-4) + 16 =$

Try these...

a)  $(-2) + (+3)$

b)  $(-1) + (-5)$

c)  $(+2) + (+7)$

d)  $(+4) + (-6)$

e)  $(-7) + 2$

f)  $(-12) + (-17)$

Example (f),  $(-12) + (-17)$ , the numbers are so large that it does not fit in the numberline above. So there is got to be an faster way of determining the solutions.

**Rule:**  $(+ \text{ integer}) + (+ \text{ integer})$

- Answer is always \_\_\_\_\_
- Add the number (without the sign)

Example  $(+37) + (+23) =$

**Rule:**  $(- \text{ integer}) + (- \text{ integer})$

- Answer is always \_\_\_\_\_
- Add the number (without the sign)

Example  $(-41) + (-16) =$

**Rule:**  $(- \text{ integer}) + (+ \text{ integer})$  or  $(+ \text{ integer}) + (- \text{ integer})$

- Answer can be either \_\_\_\_\_ or \_\_\_\_\_
- Subtract the number (without the sign)
- The sign will be whatever that matches the largest number.

Try these...

a)  $(-12) + (-24)$

b)  $(-21) + (+13)$

c)  $(+23) + (+23)$

d)  $(+44) + (-16)$

e)  $(-37) + (+8)$

f)  $(-12) + (+12)$