## Mathelpers

## Add Integers

You can use a number line to help you add integers.
Find the sum +4+-6.

- Draw a number line.


Start at 0 . Move 4 spaces to the right to show ${ }^{+} 4$.


From +4 move 6 spaces to the left to show ${ }^{\mathbf{-} 6 .}$


So, $+4+-6=-2$
Find the sum $-2+-3$.

- Draw a number line.


Start at 0 . Move 2 spaces to the left to show -2.


From -2 move 3 spaces to the left to show --3.


So, $--2+--3=-5$
When adding integers two cases are to be considered:

1) Adding integers of the same sign

When adding integers of the same sign, we add their absolute values, and give the result the same sign as the two integers
2) Adding integers of opposite signs

When adding integers of the opposite signs, we take their absolute values, subtract the smaller from the larger, and give the result the sign of the integer with the larger absolute value.

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## Examples:

A- Find the sum.

$$
\begin{aligned}
& \text { 1) } \begin{array}{l}
-8+^{-} 6+9+^{-} 2 \\
-8+^{-} 6+9+^{-} 2 \\
=-14+9+^{-} 2 \\
=-5+^{-} 2 \\
=-7
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 2) } 12+-7+0+-4 \\
& 12+-7+0+-4 \\
& =5+0+-4 \\
& =5+-4 \\
& =1
\end{aligned}
$$

## My Real Life

B- Dany scored 12 points during the first half of the game then he lost 5 points during the second half. How many points did gain or lose?

$$
{ }^{+} 12+-5=+7 \text { points }
$$



