

# INTEGERS

- Integers are positive and negative whole numbers including zero.
- Set of integers:  $\{\dots, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, \dots\}$
- Integers do **NOT** include fractions or decimals.

## Addition:

- Positive integers: How much money you have!
- Negative integers: How much money you owe!
- Addition is the process of combining what you have and owe.
- Example                      Read as follows                      Read answer                      Answer

$-6 + 8$	You owe \$6 and have \$8	Have \$2	2
$3 + (-7)$	You have \$3 and owe \$7	Owe \$4	-4
$-5 + (-2)$	You owe \$5 and owe \$2	Owe \$7	-7
$6 + 4$	You have \$6 and have \$4	Have \$10	10

## Subtraction:

- If you have a difficult problem, do the opposite (change the sign) of what **follows the subtraction sign** and then write as addition.
- Example                      Written as addition                      Answer

$4 - 9$	$4 + (-9)$	-5
$7 - (-2)$	$7 + 2$	9
$-5 - 8$	$-5 + (-8)$	-13
$-3 - (-7)$	$-3 + 7$	4

## Multiplication and Division:

- LIKE signs give a positive answer.
- UNLIKE signs give a negative answer.
- Example                      Answer                      Example                      Answer

$4 \cdot 5$	20	Like signs	$10 \div 5$	2
$-3 \cdot -8$	24	Like signs	$-6 \div (-2)$	3
$7 \cdot -6$	-42	Unlike signs	$8 \div (-4)$	-2
$-4 \cdot 2$	-8	Unlike signs	$-9 \div 3$	-3