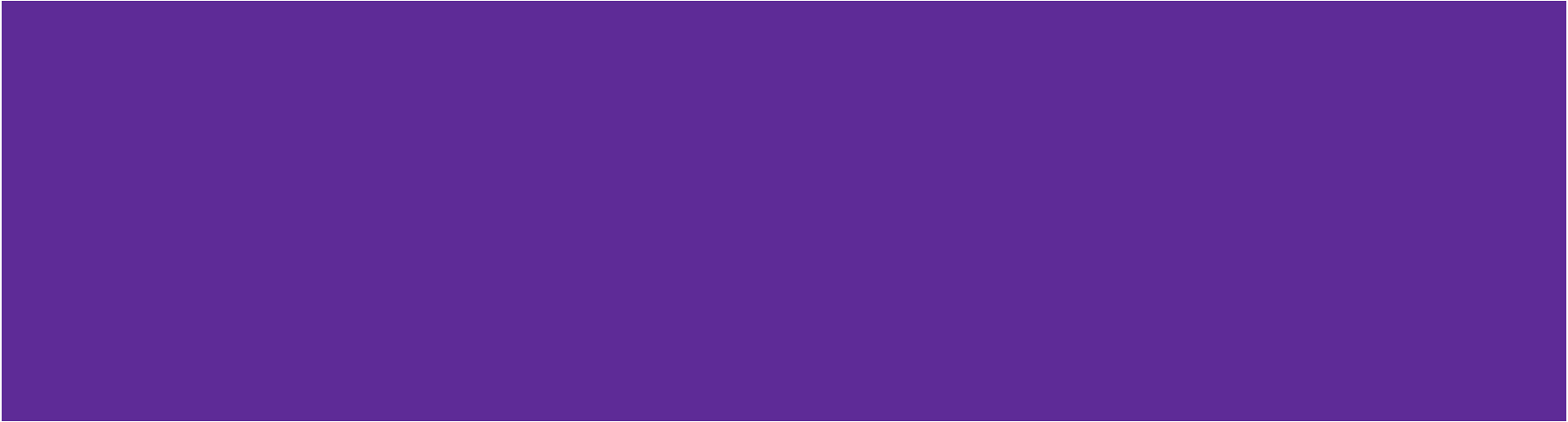


Adding & Subtracting Integers



Adding Integers: Rule #1

We have two golden rules when adding integers:

Rule #1

When adding two numbers that have the **same sign**, we **add the numbers** and **keep the sign**.

Example 1: $6 + 7$

Both these numbers are positive, so we add the numbers and keep the sign!

$$6 + 7 = 13$$

Adding Integers: Rule #1

Example 2: $-6 + -7$

Both these numbers are negative, so we add the numbers and keep the negative sign!

$$-6 + -7 = -13$$

Adding Integers: Rule #1

Example 3: $-10 + -12$

Adding Integers: Rule #1

Example 4: $-13 + -8$

Adding Integers: Rule #2

Rule #2:

When adding integers of **opposite signs**, we **subtract the numbers** and **take the sign of the bigger number** (ignore the negative sign when looking at the numbers)

Example 1: $7 + -2$

These numbers are of opposite signs, so we subtract $7 - 2 = 5$, and then take the sign of the bigger number.

What is bigger, 7 or 2? 7

Is 7 positive or negative? Positive, so our answer is also positive.

So, $7 + -2 = 5$

Adding Integers: Rule #2

Example 2: $-8 + 6$

Adding Integers: Rule #2

Example 3: $-19 + 9$

Adding Integers: Rule #2

Example 4: $-8 + 21$

Adding Integers: Rule #2

Example 5: $12 + -8$

Adding Integers: Rule #2

Example 6: $-100 + 48$

Subtracting Integers

When subtracting integers there is one main rule:

Change the equation, so it is an addition and then we change the sign of the second number.

What do we mean? Well basically we add the opposite sign.

Ex: $-7 - -2$ becomes $-7 + 2$. We are adding the opposite, and then we follow the rules of addition.

$$\begin{aligned}\text{So, } -7 - -2 &= -7 + 2 \\ &= -5\end{aligned}$$

Subtracting Integers

Example 1: $-6 - 2$

Subtracting Integers

Example 2: $-10 - -4$

Subtracting Integers

Example 3: $-10 - -5$

Subtracting Integers

Example 4: $-5 - 7$

Subtracting Integers

Example 5: $-4 - 7 = -8$

Classwork:

1. $-8 + -9$
2. $-4 + -2$
3. $-7 + 8$
4. $-2 + 1$
5. $-16 + 20$
6. $-2 - -6$
7. $-9 - 2$
8. $-2 - -11$
9. $-100 - -45$
10. $2 - -9 - 3$
11. $-9 - -7 - -4$
12. $-4 - -12 - 6$