

### **How do we add integers?**

Adding integers comes down to two rules:

- Rule 1: If the signs (+ or -) are the same, simply add the numbers and keep that value.
  - Example:  $-4 + -8 = -12$  (because  $4 + 8$  is 12)
- Rule 2: If the signs are different, simply subtract the number closest to zero from the number further away from zero and keep the sign of the number furthest from zero
  - Example:  $3 + -7 = -4$  (because  $7 - 3$  is 4)

### **How do we subtract integers?**

Subtraction and addition are friends, so subtraction just changes itself to addition by changing the second number's sign. Make sure you follow the addition rules after that.

- Example:  $-4 - 6$  means  $-4 + -6 = -10$

### **Multiplication and Division**

They, too, are friends so they share the rules

- Rule 1: When the signs are the same (either ++ or --) simply do the operation and the answer will be positive.
  - Example:  $-25 \div -5 = 5$  (since it is --)
- Rule 2: When the signs are different (either +- or -+) simply do the operation and the answer will be negative.
  - Example:  $-4 \cdot 8 = -32$  (since it is -+)