INTEGER RULES – STUDY GUIDE

SAME **SIGNS**

- ⇒ ADD the absolute values.
- ⇒ Keep the sign the same.

$$5 + 2 = +7$$

$$-3 + (-5) = -8$$

DIFFERENT SIGNS

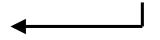
- ⇒ SUBTRACT the absolute values.
- ⇒ Keep sign of the number with the larger absolute value.

$$5 + 2 = +7$$
 $(-3) + 8 = +5$

$$-3 + (-5) = -8$$
 $6 + (-10) = -4$

SUBTRACTION

- ⇒ ADD the OPPOSITE of the second integer. "Keep, Change, Change"
- ⇒ Follow the rules for addition.



$$7 - 4$$

 $7 + (-4) = 3$

$$7 - 4$$
 $9 - (-6)$ $7 + (-4) = 3$ $9 + (+6) = +15$

$$-12 - 2$$

 $-12 + (-2) = -14$

$$-10 - (-4)$$

 $-10 + (+4) = -6$

MULTIPLICATION

ADDITION

SAME SIGNS

⇒ Product is **ALWAYS POSITIVE**

$$(8)(4) = +32$$

$$(-5)(-4) = +20$$
 $(-3)(2) = -6$

DIFFERENT SIGNS

⇒ Product is **ALWAYS NEGATIVE**

$$(8)(4) = +32$$
 $(9)(-5) = -45$

$$(-3)(2) = -6$$

DIVISION

SAME SIGNS

⇒ Quotient is **ALWAYS POSITIVE**

$$\frac{24}{4}$$
 = +6

$$\frac{-36}{-4} = +9$$

DIFFERENT SIGNS

⇒ Quotient is **ALWAYS NEGATIVE**

$$\frac{50}{-5} = -10$$

$$\frac{-28}{7} = -4$$