

# INTEGGER RULES

## INTEGERS



LIKE signs

Add & take the sign

$$-2 + (-4) = -6$$

$$4 + 6 = 10$$

DIFFERENT signs

Subtract & take the sign of the largest absolute value.

$$-4 + 8 = 4$$

$$6 + (-12) = -6$$



Change it to addition by: "Keep-change-flip"

$$(-9) - (-2) =$$

$$(-9) + (+2) = -7$$



LIKE signs

Answer is POSITIVE.

$$8 \times 6 = 48$$

$$(-60) \div (-15) = 4$$

DIFFERENT signs

Answer is NEGATIVE.

$$9 \times (-3) = -27$$

$$(-72) \div 12 = -6$$

OR use multiplication rules to eliminate double signs.

$$(-9)(-2)$$

$$-9 + 2 = -7$$

# Exponents

$$-2^4 = -\boxed{2^4}$$

$$= -16$$

$$(-2)^4 = (-2)(-2)(-2)(-2) = +16$$

If the base is negative and in a bracket then the answer will be positive if the exponent is even and negative if the exponent is odd

So  $(-2)^3 = -8$   
 but  $(-2)^4 = +16$

Any number with an exponent of 0 = 1

$$(2)^0 = 1$$

$$(-2)^0 = 1$$

Any number with an exponent of 1 = the number itself.

$$(2)^1 = 2$$

$$(-2)^1 = -2$$

# Order of Operations (BEMAS)

→ remainder if [ ( ) ] do inside brackets first

→ 2(6) or (2)(6) means multiply

→  $\frac{(-5) \times (+8)}{(-20)}$  } solve numerator, solve denominator and divide

Other personal reminders

i.e

Bs  $[-8 - (-6)]^2 + 3 \times (-4)$

Ba  $[-8 + 6]^2 + 3 \times (-4)$

E  $4 + 3 \times -4$

M  $4 + -12$

A  $(-8)$

i.e

B  $\frac{(3+4) \times 4}{14 \div (5-3)}$

M  $\frac{7 \times 4}{14 \div 2}$

D  $\frac{28}{7}$

$(4)$