MULTIPLYING & DIVIDING INTEGERS

Rules for Multiplying and Dividing Integers

1) Determine the sign on the answer first
   - If the integers have the **SAME Signs**: the answer is _____
   - If the integers have **DIFFERENT Signs**: the answer is _____
2) Determine the numeric value of the operation

Examples: $-2 \times 7 =$ $-1 \times 4 =$ $-12 \div 6 =$

Examples: $3 \times -7 =$ $3 \times -4 =$ $40 \div -5 =$

Examples: $6 \times 3 =$ $28 \div 7 =$ $54 \div 9 =$

Examples: $-8 \times -3 =$ $-24 \div -6 =$ $-9 \div -1 =$

WHAT WILL IT LOOK LIKE? Other Ways To Write x and ÷

- **Another way to indicate multiplication of numbers in math is to use brackets ( ) around one or more numbers.**

Examples: $3\,(4) =$ $(8)(-2) =$ $-6\,(-7) =$

$=$ $=$ $=$

- **Another way to show division of numbers in math is to write them as a fraction**

Examples: $\frac{12}{2} =$ $\frac{-6}{-3} =$ $\frac{8}{-2} =$

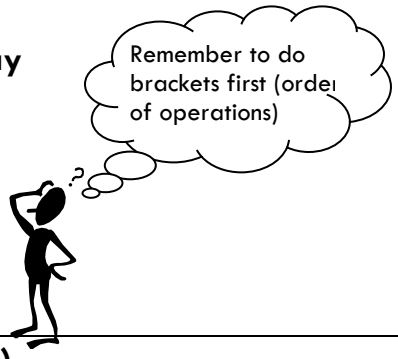
$=$ $=$ $=$

- **We can also put multiplication and division together this way**

Examples: $6\left(\frac{9}{3}\right) =$ $\frac{-16}{-4}(2) =$

$=$ $=$

$=$ $=$



THE INVISIBLE ONE (1)

- **When there is a negative sign IN FRONT of a bracket, there is an invisible "1" between the negative sign and the bracket**

Examples: – (3) means – (-6) means

- **This explains the rule for subtracting negatives (see yesterday's lesson)**
  ****SUBTRACTING A NEGATIVE IS LIKE ADDING A POSITIVE****

Yesterday we saw that **3 – (-5) = 3 + 5** this is because **3 – (-5) = 3 – 1(-5)**
= 3 + 5
= 8

Since -1(-5) = 5

CALCULATE

(a) (–2) × (+5) × (–7)

=

=

(b) (–2) × (–3) × (–4)

=

=

(c) (+6) × (–5) × (+4)

=

=

(d) (+8) × (–2) × (–5)

=

=

(e) (–12)(+15)(–6)

=

=

(f) (–10)(4)(6)

=

=

(g) (2)(–7)(–5)

=

=

(h) (–1)(–2)(–3)(–4)

=

=

Find a pair of integers that meet the following requirements

a) Multiply to 6
Add to 5

b) Multiply to -10
Add to -9

c) Multiply to 25
Add to -10