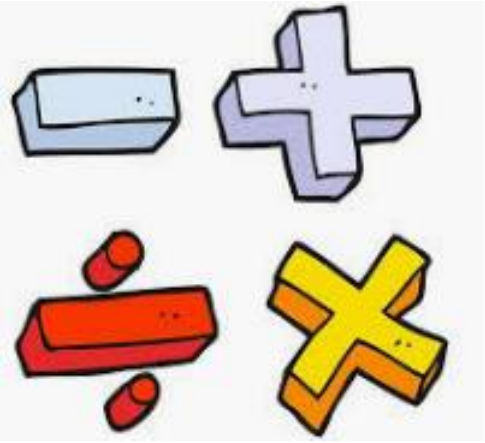
Year 7 – Unit 2 – Knowledge Organisers

Objective
Understand and use place value when working with whole numbers and decimals
Add, subtract, multiply and divide whole numbers and decimals
Recognise and use relationships between operations including inverse operations



Key Facts:

Powers of Ten (Some of them anyway!)

$10^3 = 1000$ $10^0 = 1$

$10^2 = 100$ $10^{-1} = 0.1 = 1/10$

$10^1 = 10$ $10^{-2} = 0.01 = 1/100$

8 x 100 = 800 and 34 x 1000 = 34000

But we're not just adding zeros!

It's the PLACE VALUE which changes!

8.5 x 100 = 850

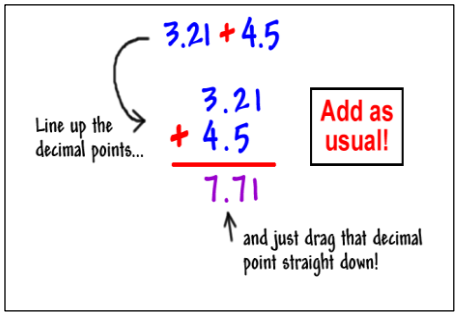
3.4 x 1000 = 3400

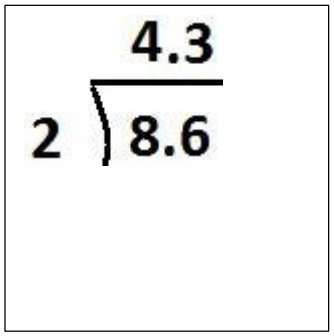
25 x 100 = 2500

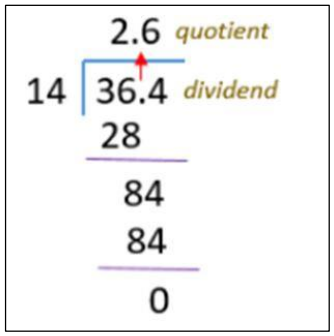
25 x 10 = 250

25 x 1 = 25

25 x 0.1 = 2.5 (Same as 25/10)







Key Concept Check

Donnie says that if 12 x 300 is 3600 then 1.2 x 300 must be 1.200. Why is Donnie wrong?

Dusty says that 3.2 + 1.45 = 4.47 What do you think went wrong in Dusty's working out?

27 x 38 ÷ 19 can be quickly and easily done with a little re-arrangement. Explain.

Key wo

Whole Numbers – any of the numbers 0, 1, 2, 3 etc; a number without fraction or decimal part

Integers – a whole number that can be positive, negative, or zero. E.g. ….-4, -3, -2, -1, 0, 1, 2, 3, 4…

Decimals – a number whose whole number part and fractional part is separated by a decimal point. The digits following the decimal show a value smaller than one.

Dividend – a number which is to be divided by another number

Quotient – the result when one number is divided by another number