Adding Decimals Simple Calculations

2.5 + 2.6 =	3.8 + 9.9 =	4.7 + 1.3 =
4.7 + 0.3 =	5 + 4.2 + 0.11 =	4.7 + 1.4 =
5 + 0.7 =	6 + 0.15 + 0.6 =	5 + 6.02 + 0.3 =

Subtracting Decimals Simple Calculations

6.4 – 3.7 =	6.25 - 0.01 =	4.56 – 1.01 =
5.2 – 2.8 =	15.4 – 2.1 =	4.78 – 2.02 =
17.1 – 9.9 =	12.4 – 6.2	6.43 – 0.62
15.4 – 0.01 Think 15.40 – 0.01	6.3 - 1.05 Think - 1.05	7.2 - 2.09 Think - 2.09
7 – 0.01 Think 7.00 – 0.01	60 – 2.7 Think - 2.7	16 – 2.03 Think - 2.03

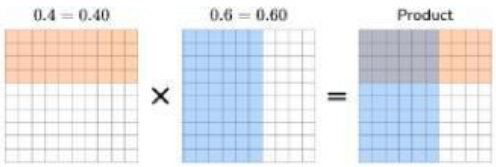
When multiplying by decimals

Multiplying Decimals

Multiplying decimals is when you multiply numbers involving decimals.
Multiplying decimal numbers is very similar to multiplying multi-digit whole numbers.

Example Work out 0.4 × 0.6

Look at the overlapped shaded region.
That area represents the product.



There are 24 squares in the overlap that are shaded.
Each square represents 0.01 (1 hundredth), so the product = 0.24

The standard algorithm for multiplication also gets a result of 0.24.

$$\begin{array}{r} 0.4 \\ \times\ 0.6 \\ \hline 0.24 \end{array}$$

→ 1 digit after decimal point
→ 1 digit after decimal point
→ Total number of digits after decimal point (1 digit + 1 digit = 2 digits)

THIRD SPACE LEARNING

1.2 x 1.2 = 1.44

Expression has 2 decimal places

12 x 12 = 144.

Move the decimal back 2 places

1.44

Multiply by the whole

12 x 15 = 180 1.2 x 1.5 = 12 x 1.2 =	11 x 12 = 180 1.1 x 1.2 = 1.1 x 0.12 =
1.3 x 0.2 =	1.4 x 0.5 =
2.1 x 0.3 =	1.2 x 0.03 =
4.3 x 0.01 =	20.5 x 0.02 =
24.2 x 0.2 =	124.4 x 0.02 =

Dividing Decimals

To **divide decimals** we can treat the division like a fraction and find an equivalent fraction which has an integer denominator.

If we are dividing by an integer, we can use the short division method.

E.g.

$$6 \overline{)\, 0.7^{1}4^{2}4} \quad 0.124$$

0.744 ÷ 6 = 0.124

If we are dividing by a decimal, we can adjust the division problem to make the decimal an integer.

E.g.

8.75 ÷ 0.7

$$\frac{8.75}{0.7} \xrightarrow{\times 10} \frac{87.5}{7}$$

$$7 \overline{)\, 8^{1}7^{3}.5} \quad 12.5$$

= 12.5

THIRD SPACE LEARNING

2.4 ÷ 0.2 is the same as 24 ÷ 2

X10 X10

Multiply both parts of the expression x10 to change the divisor into an integer

3x5=15 5x5=25 6x5=30 7x5=35	4x4=16 6x4=24 7x4 =28 8x4=32
2.5 ÷ 0.5 = ÷ =	1.6 ÷ 0.04 = ÷ =
1.5 ÷ 0.3 = ÷ =	2.8 ÷ 0.07 = ÷ =
3.5 ÷ 0.7 = ÷ =	32 ÷ 0.08 = ÷ =
1.5 ÷ 0.5 = ÷ =	24 ÷ 0.04 = ÷ =
6 ÷ 0.5 = ÷ =	3.2 ÷ 0.03 = ÷ =