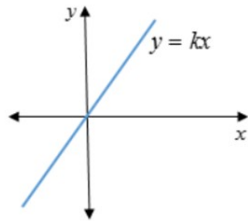


Proportion

Direct proportion = when one variable increases, the other one increases too. It is a straight line with a positive gradient.



Rounding rule

5 or more round up, less than 5 round down.

Rounding with significant figures

The significant figures of a number are the digits which carry meaning (ie. are significant) to the size of the number.

The first significant figure of a number cannot be zero.

In a number with a decimal, trailing zeros are not significant.

Eg. In the number 0.00821, the first significant figure is the 8.

In the number 2.740, the 0 is not a significant figure.

0.00821 rounded to 2 significant figures is 0.0082.



Year 8 foundation topic 6

Decimals and ratio

What careers would use these skills?

Purchasing, sales, chefs, designers, construction.

Multiply decimals

1. Multiply as if the numbers were whole numbers.
2. Count the number of decimal places in the problem.
3. Put the same number of places behind the decimal in the product.

$$\begin{array}{r} 2.34 \\ \times 1.2 \\ \hline 2.808 \end{array}$$

2 decimal places
+ 1 decimal place
3 decimal places

Multiplying by 0.1 and 0.01

Multiplying by 0.1 is the same as dividing by 10, this is because 0.1 is $\frac{1}{10}$.

Multiplying by 0.01 is the same as dividing by 100

Rounding with decimal places

Eg. Round 0.372 to 2 decimal places.

In the number 0.372, the 7 is in the second decimal place. 0.372 rounded to two decimal places is 0.37, because the 2 tells us to round down.

Be careful with money - don't write £27.4, instead write £27.40

Divide decimals

1. Make the number you are dividing by a whole number.
2. Move the decimal point the same number of places in the number you are dividing.
3. Divide as normal.
4. Put the decimal point directly above
5. Check the answer makes sense.

Ratio involving decimals

Divide both parts of the ratio by the number on the left

Eg. Write 3:2 in the form 1 : n
(divide both sides by 3)

$$1 : \frac{2}{3}$$

Ratio

To simplify a ratio, divide all parts of the ratio by a common factor.

5:10 (the highest common factor is 5 so divide both by 5)

$$1:2$$

8:10:4 (the highest common factor is 2 so divide all by 2)

$$4:5:2$$

Negative number recap

Remember -10 is bigger than -15

