

Year 7 Summer 1

Keywords:

- Solve** Finding an answer or a solution to a problem.
- Place Value** The value of a **digit** within a number
- Inequality Symbols** $x > 2$ means **x is greater than 2**
 $x < 3$ means **x is less than 3**
- Rounding** To make a number simpler but keeping it close to what it was
- Decimal Place** The position of a digit to the right of a decimal point. E.g. in 0.25, the digit 5 is in the 2nd decimal place
- Estimation** Round all numbers to 1s.f. and use them to find a rough answer
- Significant Figure** The 1st significant figure is the first non-zero digit of a number starting from the left hand side. E.g. In 0.045, 4 is the 1st significant figure and 5 is the 2nd significant figure.

Thousands	Hundreds	Tens	Units	.	Tenths	Hundredths	Thousandths
1000	100	10	1	.	1/10	1/100	1/1000
10^3	10^2	10^1	10^0	.	10^{-1}	10^{-2}	10^{-3}

Place Value

E.g. Find the value of the red digit in the number **343.456**

Since the 4 is in the tens column, the value is

40

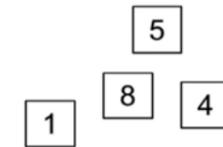
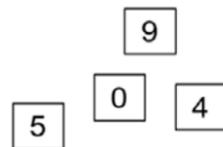
Clip N1a, N1b

Estimation

use all four digits and a decimal point to create a number as close to 5 as you can

use all four digits and a decimal point to create a number as close to 15 as you can

You may also have to solve problems like these...



Estimation / Approximation

Clip N43a, N43b

First round each number in the calculation to 1 significant figure (1s.f.) then do the calculation

$$\frac{312 \times 5.94}{2.03} \approx \frac{300 \times 6}{2} = 900$$

'approximately equal to'

Limits of Accuracy

Measurements are not always exact. They may have been rounded. You can work out its highest or lowest values according to the accuracy provided. These are the **lower** and **upper bounds**.

Remember that measurements are *approximate*.

e.g. The length of a fabric is measured to 145 cm to the nearest cm.

The **actual** length is between 144.5 cm and 145.4999999....

$$144.5 < \text{length} < 145.5$$



Lower bound (limit)

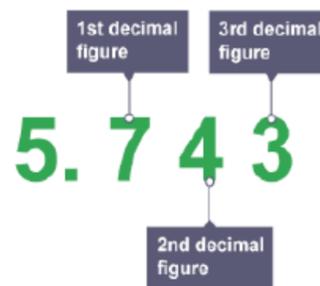
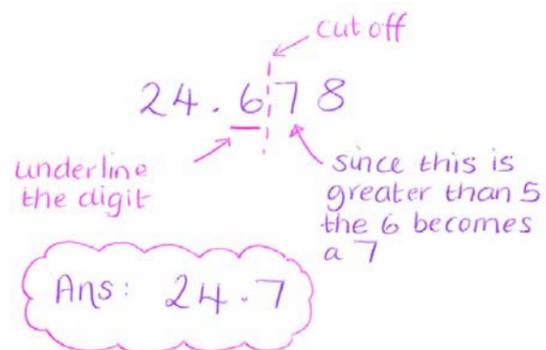
Upper bound (limit)

Notice that these limits of accuracy are written using **inequality signs** to show that the lower bound is included but the upper bound is not

Clip G29

Rounding (Decimal Places)

E.g. Round 24.678 to 1 decimal place



- ROUNDING**
- Underline the digit look next door.
 - If it's 5 or greater add one more.
 - If it's less than 5 leave it for sure.
 - Everything after is a zero, not more.

Clip N27b

Rounding (Significant Figures)

Significant Figures

0.00003400

Zeros are not significant after decimal before non-zero numbers

All nonzero numbers are significant

Here, the 3 is the **first significant figure** in this number

E.g. Round 34629 to 3 significant figures **34600**

Round 0.034629 to 3 significant figures **0.00346**

Clip N38

0.00702

Zeros after nonzero numbers in a decimal are significant

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