Investigating Number Systems

Vocabulary

Round: Making a number simpler, but keeping it close to the original value

Significant: Something that holds importance

Estimate: Approximate/guess a value

d.p.: Decimal place

s.f. : Significant figure

Rounding

Mathswatch Video: N27a/b

Whenever you round you should always follow the same steps. Doesn't matter if it's 10's, 100's or decimals.

Example:

Round 8219 to the nearest 1000

8219

8000

1) Circle the number we are rounding

2) Draw an arrow to the next number. Does it round up or down?
(5 and up rounds up, 4 and below rounds down)

3) Round the number in the circle

Example:

Round 3.546 to 2d.p.

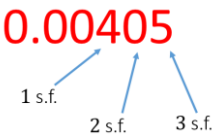
3.546

3.55

Significant Figures, s.f.

Mathswatch Video: N30b

Significant figures are numbers that are meaningful, i.e. numbers that contribute to the value. We always start counting significant figures with the **first non-zero number**.



Rounding Significant Figures

Mathswatch Video: N38

We can round significant figures using the same steps as we did on the left.

Example:

Round 15276 to 1s.f.

15276

20000

5 and above rounds up

Example:

Round 0.0743 to 2s.f.

.

0.0743

0.074

3 and below rounds down

Estimation

Mathswatch Video: N43a/b

When asked to estimate an answer you need to **round everything to 1 significant figure**. Then you can solve to find an estimate.

Example: Estimate $7.2^2 + 13 \times 2.8$

$7.2^2 + 13 \times 2.8$

$7^2 + 10 \times 3$

$49 + 10 \times 3 = 49 + 30$

79

Step by step Guide:

1) **Circle the first non zero number of each term**

2) Round each of the numbers you have circled

3) Evaluate your expression (find the answer)