

## Stage 7 – Checking, approximating and estimating



### Know it!

Knowledge	
I know...	How to round a number to any specified number of decimal places
I know...	How to round a number to any specified number of significant figures
I know...	How to estimate calculations by rounding numbers to one significant figure



### Link it!

Backward	Forward
Rounding to whole numbers, nearest 10, 100, 1000. Simplify a fraction by cancelling common factors	Upper and Lower bounds Error Intervals



### Prove it!

Convince me that 39 652 rounds to 40 000 to one significant figure.  
 Convince me that 0.6427 does not round to 1 to one significant figure.

What is wrong:  $\frac{11 \times 28.2}{0.54} \approx \frac{10 \times 30}{0.5} = 150$ , how can you correct it?

### Say it!



Vocabulary	Definition
Approximate	To be close to a particular number but not exactly that number.
Rounding	Rounding means making a number simpler but keeping its value close to what it was.
Decimal place	The position of a digit on the right of the decimal point.
Significant figure	The number of digits that are meaningful: they have an accuracy matching our measurements, or are simply all we need.
Estimate	To find a value that is close enough to the right answer, usually with some thought or calculation involved.
Accuracy	How close a measured or rounded value is to the actual (true) value.
Notation: $\approx$	An estimate