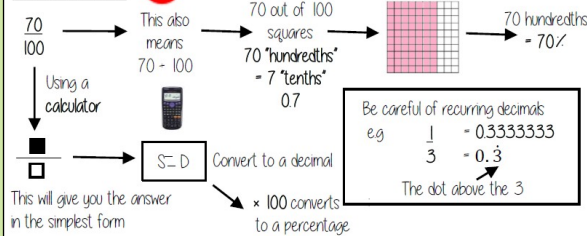


## Units are important: Useful Conversions



### Convert FDP



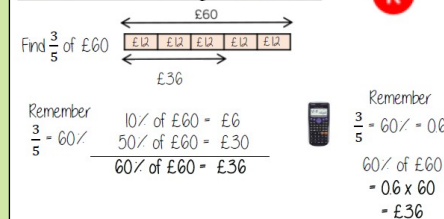
### Positive powers of 10

1 billion = 1,000,000,000  
 $10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$

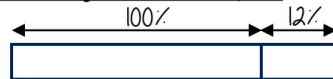
Addition rule for indices:  $10^a \times 10^b = 10^{a+b}$

Subtraction rule for indices:  $10^a \div 10^b = 10^{a-b}$

### Fraction/ Percentage of amount



### Percentage increase: Multipliers



Increase by 12%

$$100\% + 12\% = 112\%$$

Multiplier:  $100 + 0.12 = 1.12$  (More than 1)

### Percentage decrease: Multipliers

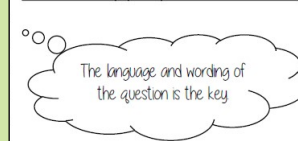


Decrease by 58%

$$100\% - 58\% = 42\%$$

Multiplier:  $100 - 0.58 = 0.42$  (Less than 1)

### Choose appropriate method



Have you represented the question in a bar model?  
 Can you use a calculator?

### Order numbers in standard form

$6.4 \times 10^{-2}$     $2.4 \times 10^2$     $3.3 \times 10^0$     $1.3 \times 10^{-1}$   
 0.064   240   1   0.13

Look at the power first  
 will the number be  $>$  or  $<$  than 1  
 Use a place value grid to compare the numbers for ordering

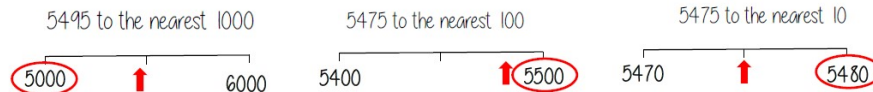
### Standard form with numbers $> 1$

Any number between 1 and less than 10 →  $A \times 10^n$  ← Any integer

### Round to powers of 10 and 1 sig figure



If the number is halfway between we "round up"



370 to 1 significant figure is 400

37 to 1 significant figure is 40

3.7 to 1 significant figure is 4

0.37 to 1 significant figure is 0.4

0.00037 to 1 significant figure is 0.0004

Round to the first non-zero number

## Mathematical Language:

Balance  
 Base  
 Commutative  
 Decimal  
 Decimal  
 Deposit  
 Equivalent.  
 Exponent  
 Fraction  
 Growth  
 Indices  
 Integer  
 Metric  
 Negative  
 Overestimate  
 Percent  
 Power  
 Reduce  
 Round  
 Significant  
 Standard (index) Form  
 Underestimate

MATHS IS  
 EVERYWHERE