Year 9 Maths: Topic: Big 10 for Year 10
Term 6

Week 1

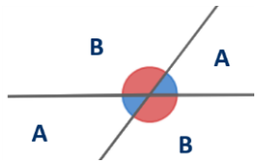
This week we will start by solving one step equations (an equation is a mathematical statement that shows that two mathematical expressions are equal).
Example:
T + 3 = 7 the inverse of +3 is subtract 3 from both sides T = 7 – 3 = **4**. The inverse of multiply is divide. We will then look at two step equations. Remember that '2T' means 2 multiply by T. Example: 2T – 3 = 9 add 3 to both sides 2T = 12 divide both sides by 2 **T = 6.** We will then look at equations with unknowns on both sides. Example:
6T – 3 = 4T + 5 Identify the smallest unknown and subtract it from both sides (4T)
2T – 3 = 5 add 3 and divide by 2 **T = 4**.
We will then look at brackets.

Week 2

This week we will look at rearranging formula (A formula is a fact or rule expressed using mathematical symbols, rearranging means make the new subject) in one step. Example: Make 'A' the subject(get it to equal something, by itself) A + B = C the inverse of +B is subtract B from both sides **A = C – B** . The inverse of multiply is divide. We will then look at rearranging formula in two steps.
Remember that '2D' means 2 multiply by D.
Example: 2D – E = F add E to both sides 2D = F + E divide both sides by 2 **$D = \frac{F + E}{2}$**
We will then rearrange formula with brackets. Example: 2(A – B) = C divide both sides by 2, $A - B = \frac{C}{2}$ then add B to both sides **$A = \frac{C}{2} + B$**

Week 3

This week we will start by looking at angles on a straight line which always add up to 180º, then we will progress to angles around a point which always add up to 360º. We will then look at vertically opposite angles which are always equal and move on to angles in a triangle which always add up to 180º.



Both angle A's are equal.
Both angle B's are equal.

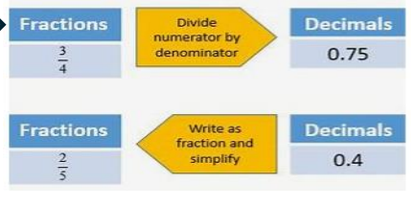
We will then look at the angles in a quadrilateral (a shape with 4 sides) which always add up to 360º.
We will then look at calculating interior and exterior angles of polygons (multi-sided shapes with all straight lines).

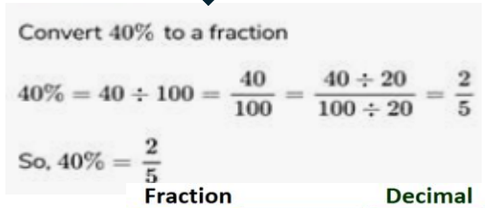
Week 4

This week we will look at forming and simplify ratios. Example: there are 4 apples and 10 bananas in a bowl written as a ratio **4:10**. To simplify, look for the HCF (highest common factor) of both numbers and then divide by that number, in this case 2, 4 :10 simplified **= 2 : 5.** We will then look at dividing an amount up into a given ratio Example: Divide the Amount £800 into the ratio of 3:5. First step count the number of parts in total 3 + 5 = 8. Now divide the amount by the total number of parts. £800 ÷ 8 = £100 this means each part is worth £100. So 3 parts =3 x £100 = £300 and 5 parts = 5 x £100 = £500 as a ratio £300 : £500.
We will then look at combining ratios and then solving problems with ratios.

Week 5

The next topic is Fractions. Decimals and percentages. 100% = 1 whole & 50% = 0.5. To convert a percentage to a decimal ÷ by 100. To convert a decimal into a percentage x by 100. Example: We will then look at converting between percentages and Fractions.





we will then Interchange between FDP

Key Vocabulary

Expression: An expression is a mathematical sentence consisting of numbers, variables, and math operators.
Equation: a statement that the values of two mathematical expressions are equal (indicated by the sign =).
HCF: Highest common factor.
Ratio: A ratio is a mathematical term that is used to compare two or more numbers by division.
Formula: A formula is a fact, rule, or principle that is expressed in terms of mathematical symbols.
Rearrange: Change the form of an equation or a formula so that a different variable is the subject.

Year 9 Maths: Topic Big 10 for Year 10

Week 1

Questions	Answers
What is an equation?	An equation is a mathematical statement that shows that two mathematical expressions are equal.
What is the inverse to add?	Subtract.
What is the inverse to subtract?	Add.
What is the inverse to multiply?	Divide.
What is the inverse to divide?	Multiply.

Week 2

Questions	Answers
What is a formula?	A formula is a fact or rule expressed using mathematical symbols.
What is the subject of a formula?	Get it to equal something, by itself.
What does rearrange mean?	Make it the new subject?
What is the inverse to Add?	Subtract.
What is the inverse to subtract?	Add.

Week 3

Questions	Answers
What do the angles on a straight line add up to?	180º
What do the angles around a point add up to?	360º
What do the internal angles of a triangle add up to?	180º
What do the internal angles in a Quadrilateral add up to?	360º
What are vertically opposite angles?	Angles that are equal.

Week 4

Questions	Answers
What is HCF?	Highest common factor.
What is the ratio sign?	:
How do you simplify two amounts written as ratio?	Find the HCF of both amounts and then divide it into the two numbers.
How do you divide an amount into a given ratio?	Add the number of parts. Divide the amount by the total number of parts. Multiply each ratio by the amount.
Simplify 4 : 10	2 : 5

Week 5

Questions	Answers
How do you convert from a decimal to a percentage?	Multiply by 100.
How do you convert from a percentage to a decimal?	Divide by 100.
How do you convert a fraction to a decimal?	Divide the numerator by the denominator.
What is FDP?	Fractions, decimal & percentages.

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