

S3 Preparing for National 5 – Pupil Information Sheet

Right-angled Triangle Trigonometry

TJ p70 - 72

Identify the relationship between sides and angles in a R.A.T
 Use the Sine, Cosine or Tangent ratio to find a side or an angle
 Use the Sine or Cosine ratio to find the hypotenuse
 Use SOHCAHTOA to choose the correct trig ratio

Surds, indices and Standard form

TJ Chapter 17

Simplify surds
 Add, subtract, multiply and divide surds
 Rationalise the denominator
 Use laws of indices
 Understand the meaning of zero and negative indices
 Use standard form in calculations

Arcs and Sectors

TJ Chapter 13

Find the length of an arc or the area of a sector
 Work backwards to find the angle or the radius

Expanding Brackets

TJ Chapter 1

Expand double brackets two terms x two terms
 Expand double brackets two terms x three terms

REVISION FOR OCTOBER TEST		
TOPIC	Textbook questions using TJ National 5	Videos from Corbett maths
Using <i>sohcahtoa</i> to find a side or angle	Page 9 Q86 Page 70 Q1 & 2 Page 71 Q3, 7,8 & 9	329 - 331
Simplifying surds	Page 170 Q1 Page 171 Q2 Page 171 Q7 Page 172 Q10	305 - 308
Using the laws of indices	Page 173 Q1, 4 & 5 Page 175 Q7 & 8 Page 175 Q12 Page 177 Q1 & Q2a – k	172 - 175
Scientific Notation	Page 5 Q45, 46, 47	300, 302, 303
Expanding double brackets	Page 14 Q1 Page 15 Q4 Page 16 Q6 Page 17 Q1 a – f Page 19 Q3	13 - 15
Circles - Finding arc length or sector area	Page 126 Q4 & 5 Page 127 Q4 & 5 Page 128 Q1 – 5 Page 131 Q2 & 3j	46, 58

Changing the Subject of a Formula**TJ Chapter 10**

Change the subject of a formula involving three operations including + or -, $\times$ or $\div$ and powers or roots.

Volumes of Solids

Know how to find the volume of any prism (including a cylinder)

Use the formulae given to find the volume of a sphere, cone or pyramid

Find the volume of compound solids

Solve problems involving working backwards

Factorising**TJ Chapter 7**

Factorise by taking out a common factor

Factorise the difference of two squares

Factorise a trinomial

Factorise a trinomial with coefficient of x^2 not equal to 1

Factorise fully using a combination of methods

Pythagoras' Theorem**TJ Chapter 5**

Use Pythagoras' Theorem in complex situations including 3D problems

Use the converse of Pythagoras' Theorem to justify if a triangle is right-angled

Use Pythagoras' Theorem to find the distance between two on a grid

Completing the Square**TJ p187**

Write a trinomial in the form $(x + a)^2 + b$

Percentages and Fractions**TJ Chapter 2 & 3**

Calculate the new amount for problems involving appreciation or depreciation

Calculate the original value after a percentage change

Simplify a fraction

+, -, $\times$ and $\div$ fractions and mixed numbers

Use BIDMAS in calculations involving fractions

Equation of a Line**TJ Chapter 6**

Find the gradient of a line between two points

Find the equation of a straight line in the form $y = mx + c$

Rearrange the equation of a straight line

Identify the gradient and y-intercept from the equation of a line

Equations and Inequations

Solve linear equations and inequations including brackets

REVISION FOR MARCH TEST		
TOPIC	Textbook questions using TJ National 5	Videos from Corbett maths
Surds	P 171	305 - 308
Indices	P 174 - 177	17, 172 - 175
Fractions	P29 - 30	133, 139, 140
Brackets	P 13 - 14	13 - 15
Factorising	P 66 - 69	117 - 120
Change the subject	P 103	7 - 8
Arc /sector of circle	P 131	46, 58
Straight Line	P62	187, 189, 190 to 195
Pythagoras	P49	257-263
Percentages	P27	240
Complete the square	P187	267a
Volume of solids	P8	355-361

Algebraic Fractions**TJ Chapter 9**

Simplify algebraic fractions

$+$, $-$, $\times$ and $\div$ algebraic fractions

Statistics**TJ Chapter 11**

Calculate the mean and standard deviation

Calculate the median, quartiles and interquartile range

Make valid comparisons between two sets of data referring to the average and consistency

Line of Best Fit**TJ Chapter 18**

Plot a scattergraph and draw the line a best fit

Determine the equation of the line of best fit in the form $y = mx + c$

Use the equation of the line of best fit to calculate values

REVISION FOR MAY EXAM	
TOPIC	Textbook questions using TJ National 5
Surds and Indices	Page 178 Q3 and 7 Page 208 Q31, 32
Arcs and Sectors of Circles	Page 131 Q1,2, 3 and 4 Page 211 Q55, 56
Volume of solids	Page 8 Q74 to 76 P221 Q10
Expanding Brackets	Page 19 Q3
Factorising	Page 66 Q1, Page 67 Q2
Completing the square	Page 187 Q1,2 and 3
Percentage increase and Decrease	Page 26 Q4 Page 28 Q10 and 11
Pythagoras	Page 49 Q1, 3, 5, 7
Numerical Fractions	Page 204 Q8 and 9
Straight lines	Page 52 Q1, Page 53 Q7 and 11, Page 54 Q2 and 3 Page 205 Q13, 14
Algebraic Fractions	Page 92 Q4,5,6 Page 93 Q2,3, 4, 5 Page 95 Q5,6 Page 96 Q2,3, Q4(a)-(d)
Equations and Inequations	Page 5 Q42 to 44
Statistics	Page 110 Q5, 6 Page 115 Q7, 8