Never Stop Flying

Mathematics

Achieving Excellence through a Values Driven Education

QLA – Recent Trial

Foundation

Mathematics

Maths Trial – February 2024

Name: Gray, Daniel
Class: 11P5

Grade: 4
Total Marks: 174
Marks from next grade: 8

You should use your question level analysis to help close the gaps in your current maths knowledge.

For some of these gaps and questions, you will go over again in class, but some will be individual to you.

Use **Sparx Maths** and **Dr Frost** to help improve and close the gaps.

Using your analysis grids from your recent trial exam.

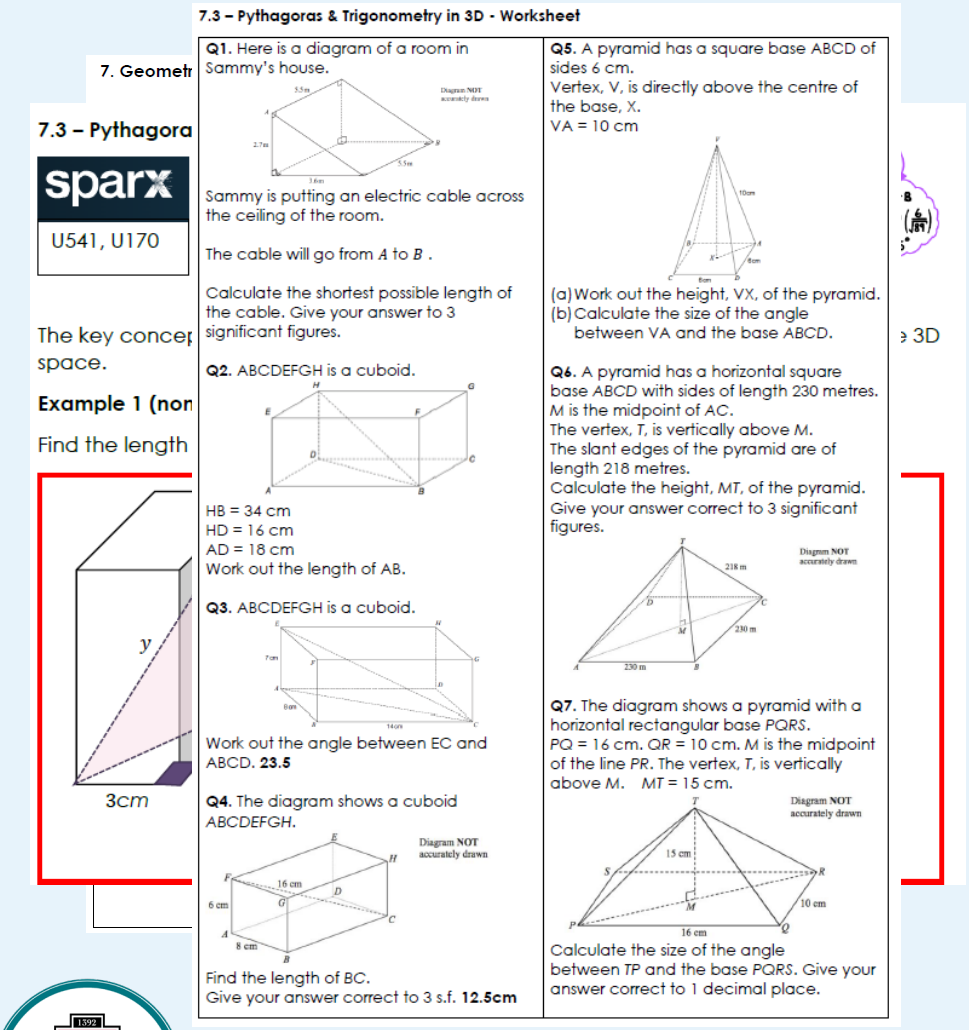
Look at your "Red" and "Amber" topics first.

Revise and practice these topic using the Sparx Maths codes

13a	Writing probabilities as fractions	1 / 1	U408
13b	Probabilities of mutually exclusive events	1 / 1	U683
14	Substituting into algebraic formulae	2 / 2	U585
15a	Estimating calculations	2 / 2	U225
15b	Multiplying and dividing with place value	0 / 1	U735
16a	Calculating with speed	3 / 3	U151
16b	Calculating with speed	1 / 1	U151
17a	Frequency trees	3 / 3	U280
17b	Frequency trees	0 / 2	U280
18	Solving direct proportion word problems	2 / 2	U721
19	Percentage change without a calculator	3 / 3	U773
20	Adding and subtracting fractions	0 / 3	U736
21	Drawing stem-and-leaf diagrams	3 / 3	U200
22	Plans and elevations, Finding the volume of cylinders	1 / 3	U743, U915
23	Solving single inequalities	1 / 2	U759
24	Prime factor decomposition	2 / 2	U739
25	Sharing amounts in a given ratio, Finding fractions and percentages of amounts	1 / 5	U577, U881, U554

Be Kind

Booklets



7. Geometr

7.3 – Pythagora

sparx

U541, U170

The key concep
space.

Example 1 (non

Find the length

7.3 – Pythagoras & Trigonometry in 3D - Worksheet

Q1. Here is a diagram of a room in Sammy's house.

Sammy is putting an electric cable across the ceiling of the room.

The cable will go from *A* to *B* .

Calculate the shortest possible length of the cable. Give your answer to 3 significant figures.

Q2. ABCDEFGH is a cuboid.

HB = 34 cm
HD = 16 cm
AD = 18 cm
Work out the length of AB.

Q3. ABCDEFGH is a cuboid.

Work out the angle between EC and ABCD. **23.5**

Q4. The diagram shows a cuboid *ABCDEFGH*.

Find the length of *BC*.
Give your answer correct to 3 s.f. **12.5cm**

Q5. A pyramid has a square base ABCD of sides 6 cm.
Vertex, V, is directly above the centre of the base, X.
VA = 10 cm

(a) Work out the height, VX, of the pyramid.
(b) Calculate the size of the angle between VA and the base *ABCD*.

Q6. A pyramid has a horizontal square base *ABCD* with sides of length 230 metres.
M is the midpoint of *AC*.
The vertex, *T*, is vertically above *M*.
The slant edges of the pyramid are of length 218 metres.
Calculate the height, *MT*, of the pyramid.
Give your answer correct to 3 significant figures.

Q7. The diagram shows a pyramid with a horizontal rectangular base *PQRS*.
PQ = 16 cm. *QR* = 10 cm. *M* is the midpoint of the line *PR*. The vertex, *T*, is vertically above *M*. *MT* = 15 cm.

Calculate the size of the angle between *TP* and the base *PQRS*. Give your answer correct to 1 decimal place.

Using your analysis grids from your recent trial exam, identify the topics that you require more practice on.

Find these within the booklets accumulated over the year, read over the worked examples and then completed the associated worksheet.

Aim High

Enrichment (Past Paper Club)

In the run up to the real summer exams, each Wednesday we will offer a past paper club.

You will be given a past paper to complete with maths specialists on hand to support via 1-1 or live whole class modelling

Final answers are provided so you can self-assess easily and then identify the questions you need support with.

If you can't attend, then a paper will be given to you to take away and complete at home.

Revision Lists and Worksheets

GCSE HIGHER REVISION LIST

Topic	Blue Book	Link to DrFrost Exam Questions	Sparx	🙂	😐	😢
HCF & LCM using prime factors	1	Factors and primes	U250			
Indices 1 (Multiplying, dividing, power)	2	Indices 1	U235			
Indices 2 (Fractional and negative)	3	Indices 2	U772,U985			
Standard Form - Writing and Calculations	8	Standard form	U161,U264,U290			
Recurring decimals to fractions	9	Recurring decimals	U689			
Simplifying Surds	12	Surds 1a	U338,U633,U872			
Expanding brackets with surds	49	Surds 2a	U499			
Surds - Rationalising the denominator	49	Surds 2b	U707,U281			
Error Intervals	11	Accuracy and error	U301,U587,U657			
Upper & Lower Bounds	10	Upper and lower bounds	U657			
Limits of Accuracy	11	Accuracy and error	U587			
Counting Strategies		Counting strategies	U369			

GCSE FOUNDATION REVISION LIST

Topic	Green Book	Link to DrFrost Exam Questions	Sparx	🙂	😐	😢
Multiplying Decimals	7	Multiplying Decimals	**U293**			
Prime Factorisation	11	Prime Factorisation	**U739**			
Lowest Common Multiple	12	Lowest Common Multiple	**U751**			
Order of Operations	16	Order of Operations	**U976**			
Index Laws	9	Index Laws	**U662, U694**			
Standard Form (writing)	17	Standard Form - Writing	**U330, U534**			
Standard Form (Multiply & Divide)	18	Standard Form - Multiply and Divide	**U264**			

For extra practice - Log into your www.drfrostmaths.com

Then use the links on the revision sheets to access the worksheets and practice all the key topics likely to be on the papers this summer.

Be Proud