

# On The Trial Trail

## ~ Revision Papers ~

For the January 2024 IGCSE Trial Examinations

Target Grades : Level 4, 5, 6 and 7



## “Brain illumination”

A photograph by Martin Hansen  
The night sky over Shrewsbury, England,  
on 25th November 2023 at 7.22 pm

# Trial Trail Revision #1

IGCSE Mathematics  
Trial Trail Revision Papers

*Answer as many questions as you can*  
*You are expected to have a calculator available*

Marks Available : 40

## Question 1

Leon worked out the area of a rectangle in  $\text{cm}^2$ .  
The answer appeared on his calculator as follows;

202500

- ( i ) Write this number in standard form.

[ 1 mark ]

- ( ii ) The length of the rectangle was 250 cm.  
What was its width ?

[ 3 marks ]

## Question 2

Square each of the following;

- ( i ) 13

- ( ii )  $\sqrt{45}$

- ( iii )  $(2x + 3)$

- ( iv )  $\sin 30^\circ$

[ 1, 1, 3, 2 marks ]

## Question 3

Toby has  $\text{£}x$  in his wallet.  
Ashton has  $\text{£}14$  more than Toby in his wallet.  
Altogether they have  $\text{£}60$  in the two wallets.  
What is the value of the money in Toby's wallet ?

[ 3 marks ]

#### Question 4

A Nestlé 6 pack selection of breakfast cereals contains the following;

- 45g box of “Shreddies”
- 50g box of “Fruitful”
- 30g box of “Golden Grahams”
- 25g box of “Cheerios”
- 30g box of “Nesquik”
- 40g box of “Clusters”

Clearly showing your working, calculate the mean (average) of the weights of the boxes of breakfast cereal.

[ 4 marks ]

#### Question 5

When driving in his car, Dr Linear Knott averaged 40 km/h for 2 hours and then averaged 60 km/h for 3 hours.

Dr Linear Knott mistakenly thinks that his average speed is 50 km/h.

You must explain in three steps why he is wrong.

( i )      What distance did he cover in the first 2 hours ?

[ 2 marks ]

( ii )      What distance did he cover in the second 3 hours ?

[ 2 marks ]

( iii )      Calculate his overall average speed in km/h by using the formula,

$$\text{Average Speed} = \frac{\text{Total distance}}{\text{Total time}}$$

[ 2 marks ]

**Question 6**

A bag contains some shapes.

Each shape is a circle or a triangle or a square.

Lewis takes at random a shape from the bag.

The probability that he will take a circle is 0.3

The probability that he will take a triangle is 0.1

( i )      Work out the probability that he will take a square.

[ 2 marks ]

( ii )      Work out the probability that he will take a shape with straight edges.

[ 2 marks ]

Frankie takes at random one of the shapes from the bag and then replaces the shape.

She does this 160 times.

( iii )      Work out an estimate for the number of times she will take the circle.

[ 2 marks ]

**Question 7**

Ryan's salary was increased from £56 500 to £59 664

( i )      Work out the percentage increase in Ryan's salary.

[ 2 marks ]

Monty's salary was increased by 5.2%

After the increase, his salary was £56 282

( ii )      Work out his salary before the increase.

[ 2 marks ]

### Question 8

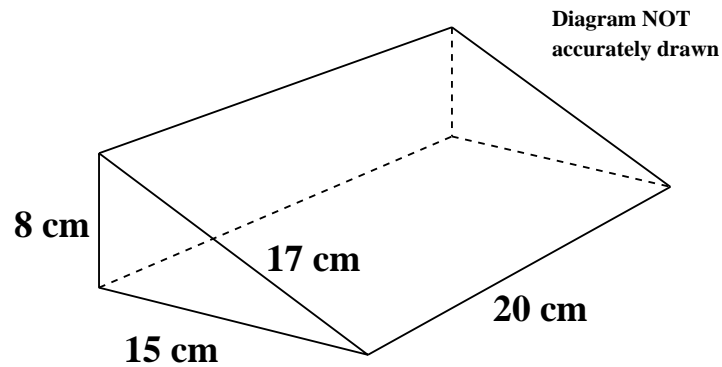
The diagram shows a prism.

The cross section of the prism is a right-angled triangle.

The lengths of the sides of the triangle are 8 cm, 15 cm and 17 cm.

The length of the prism is 20 cm.

Work out the total *surface area* of the prism.



Be sure to show detailed working such that a marker can follow your method.

[ 6 marks ]