

*In Search  
of the Holy  
Grail*

The purpose of this unit of work, based on the theme “In search of the Holy Grail”, is to help you to revise your mathematics in the context of a problem solving activity.

- Diagrams in this book are not drawn to scale. Use the measurements on each of the diagrams in your calculations.
- When you have found the answers to the clues, put the points on the graph sheet at the back of the book. When you join these points in the order given towards the end of the booklet you will find the Holy Grail.
- ***Show all your working out for each question!!!***



“The Holy Grail? Have you checked Ebay?”

## In Search Of The Holy Grail

*You are to join Sir Galahad, Sir Lancelot, Sir Bors, Sir Percival and Sir Arthur as they set out to find the Holy Grail. They leave from Camelot where they farewell the beautiful Lady Gweneveir. The City of Camelot, from where they depart, can be located by the co-ordinates (0, 0). Follow the clues, mapping the points on your graph page and see if you can find the Holy Grail.*

*As you mark each point on your graph, put the number of the clue beside the point.*

**CLUE 1**

Starting at (0,0) move 8 units up the y-axis and 4.5 units across the x-axis. Now mark this point on the graph paper at the back of this booklet and label it 1

**CLUE 1**

**CLUE 2**

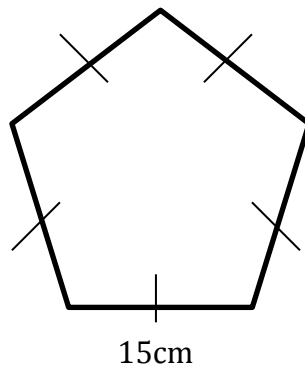
Find the perimeter of a square with its side length of 14cm. Your answer should be a two digit answer ab. Your coordinate will be in the form (a,b)

**CLUE 2**

**CLUE 3**

Find the perimeter of the following shape.

Again your answer should be a two digit answer ab. Your coordinate will be in the form of (a,b)

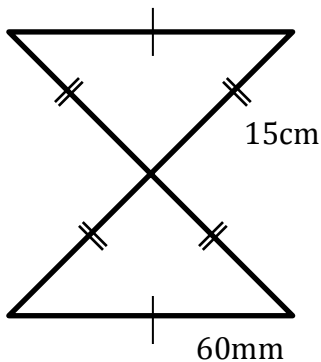


**CLUE 3**

**CLUE 4**

Find the perimeter of the following shape in cm.

Your answer should be in the form of (a,b)



**CLUE 4**

*The knights now approach a large castle set on a hill with a flag billowing in the wind.*

**CLUE 5**

Jo's floor cleaning product requires a ration of 500ml of water to 100ml of solution. Write this ratio in its simplest form of a:b. Your coordinate will be in the form of (a,b)

**CLUE 5**

**CLUE 6**

At Jacks birthday party, he is going to serve 600 pieces of finger food for the 60 people attending the party. What is the ratio of food to people? Write this ratio in its simplest form of a:b. Your coordinate will be in the form of (a,b)

**CLUE 6**

**CLUE 7**

To fill up my 10L tank of fuel I need a ratio of 4 parts fuel to 1 part oil, 4:1. To fill up the tank how much fuel and oil do I need? Your coordinate will be in the form of (fuel, oil)

**CLUE 7**

**CLUE 8**

The year 8 camp school camp this year has a ratio of 7 boys to 10 girls. If there are 50 girls attending the camp, what is the total number of students? Your answer should be a two-digit answer ab. Your coordinate will be in the form of (a,b)

**CLUE 8**

**CLUE 9**

With a ratio of 5:3, apples to bananas, and a total of 16 pieces of fruit in the bowl. What is the total number of apples and bananas? Your coordinate will be in the form of (apples, bananas)

**CLUE 9**

**CLUE 10**

Convert the following units of measurement:

a)  $10500\text{m} - \underline{\hspace{2cm}}\text{km}$

b)  $800\text{cm} - \underline{\hspace{2cm}}\text{m}$

Your coordinate will be in the form (a,b)

**CLUE 10****CLUE 11**

Convert the following units of measurement:

a)  $45\text{mm} - \underline{\hspace{2cm}}\text{cm}$

b)  $80\text{mm} - \underline{\hspace{2cm}}\text{cm}$

Your coordinate will be in the form (a,b)

**CLUE 11****CLUE 12**

Convert the following units of measurement:

a)  $4\,500\,000\text{mm} - \underline{\hspace{2cm}}\text{km}$

b)  $900\text{cm} - \underline{\hspace{2cm}}\text{m}$

Your coordinate will be in the form (a,b)

**CLUE 12****CLUE 13**

Add the following units of measurement, ensure your answers are in m.

a)  $2\,000\text{mm} + 300\text{cm} + 1\text{m} = \underline{\hspace{2cm}}$

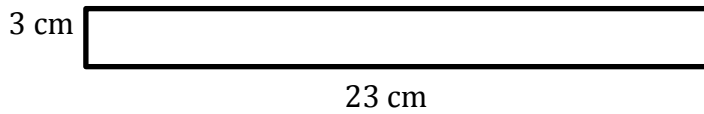
b)  $0.006\text{km} + 200\text{cm} = \underline{\hspace{2cm}}$

Your coordinate will be in the form (a,b)

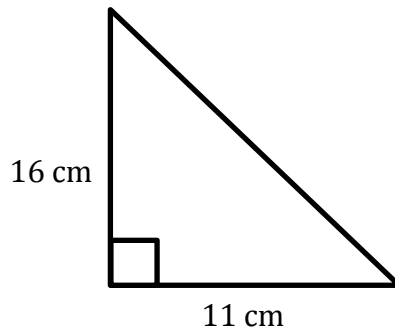
**CLUE 13**

**CLUE 14**

Find the area of the following rectangle. Your answer should be a two-digit answer ab. Your coordinate will be in the form (a,b)

**CLUE 14****CLUE 15**

Find the area of the following triangle. Your answer should be a two-digit answer ab. Your coordinate will be in the form (a,b)

**CLUE 15****CLUE 16**

What is the length and the width of a square that has an area of  $81m^2$ ? Your coordinate will be in the form of (length, width)

**CLUE 16****CLUE 17**

If the area of a rectangle is  $84cm^2$ , and its width is 8cm, what is the length of the rectangle? Your coordinate will be in the form of (length, width)

**CLUE 17****CLUE 18**

The area of a triangle is  $47.25m^2$  if the length and height of the triangle has 1.5 of a difference, and the length is 9m, what is the height of the triangle? The coordinate will be in the form (height, length).

**CLUE 18**

**CLUE 19**

Convert the following to decimal form. Your coordinate is in the form (a,b)

a)  $\frac{9}{2} =$  \_\_\_\_\_

b)  $\frac{171}{19} =$  \_\_\_\_\_

**CLUE 19****CLUE 20**

Find the answers to the following (Your coordinate is in the form (a,b)):

a)  $\frac{3^2}{2} =$  \_\_\_\_\_

b)  $5 + 3 \times 2 =$  \_\_\_\_\_

**CLUE 20****CLUE 21**

Solve for the unknown letters. Your coordinate is in the form (a,b)

a)  $2(a + 1) = 15$

b)  $b + 13 - 2.5 = 21$

**CLUE 21****CLUE 22**

If  $a=2$ ,  $b=3$ ,  $c=0.5$ , evaluate the following (Your coordinate is in the form (a,b)):

a)  $a(b + c) =$  \_\_\_\_\_

b)  $3b + 3c =$  \_\_\_\_\_

**CLUE 22**

*Just beyond the first door, the knights find the second brick wall. The second door to the castle will not open until the puzzle is solved.*

**CLUE 23**

Complete the puzzle below.

A magic square is a square arrangement of numbers in which the sums of each row, column and diagonal are the same. Solve the magic square and find your coordinates from the following questions:

13		7
	8	
	12	3

- a) Add 1.5 to the number in the bottom left.
- b) Add 7 to the top number in the middle
- These answers will form the co-ordinates (a, b).

**CLUE 23**

**CLUE 24**

Complete the puzzle below and answer the questions to obtain your coordinates.

-4	9	-8		-12
-11	-3	10	-7	1
	-10		6	-6
	3	-14		7
8			-13	

- a) What number did you fill in in the top row?
- b) Add 12 to the second last number in the second last row.
- These answers will form the co-ordinates (a, b).

**CLUE 24**

**The Holy Grail.**

Graph your points, and connect them according to the order of the clues.



