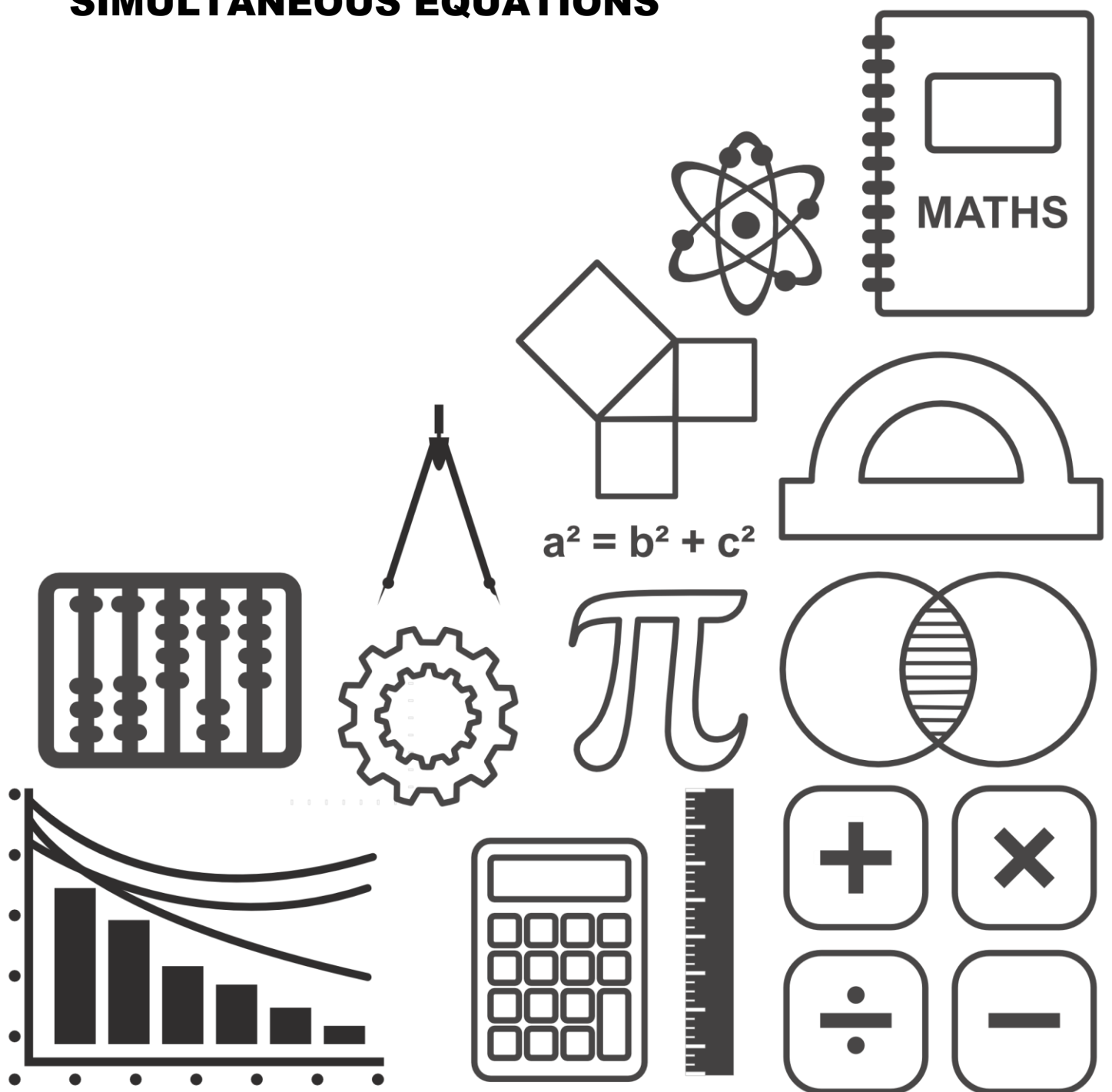


GCSE TOPIC BOOKLET SIMULTANEOUS EQUATIONS



[4]

$$\begin{array}{r} 5a + 7b = 63 \\ 10a - 4b = 18 \end{array}$$

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

2.

Solve the following simultaneous equations using an algebraic method. You must show all your working.

[4]

$$3x + 5y = 6.5$$

$$2x - 2y = -9$$

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

3.

Solve the following simultaneous equations using an algebraic (not graphical) method. You must show all your working.

[4]

$$4x - 3y = 11$$

$$6x - 2y = 9$$

[illegible]

[5]

[illegible]

5.

Glyn employs two people, Ben and Ceri.
Ben and Ceri are paid at different hourly rates.

Glyn has recorded how many hours Ben and Ceri have worked on Monday and Tuesday. He has also recorded the total amount he has paid out in wages.

Day	Number of hours worked		Total pay (£)
	Ben	Ceri	
Monday	6	5	116
Tuesday	4	8	138

Use an algebraic method to calculate how much Ben and Ceri are paid per hour.

[6]

[illegible]

Ben is paid £ per hour

Ceri is paid £ per hour

Use an algebraic method to find how much Jen pays in total for 5kg of raspberries and 7kg of blackcurrants. [6]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[4]

[illegible]

Number of child tickets =

Diagram 1 shows a rectangle A with length $2x$ cm and width $3y$ cm. The perimeter of rectangle A is 94 cm.

Use an algebraic method to calculate the area of each rectangle.

[illegible]

Diagram not drawn to scale

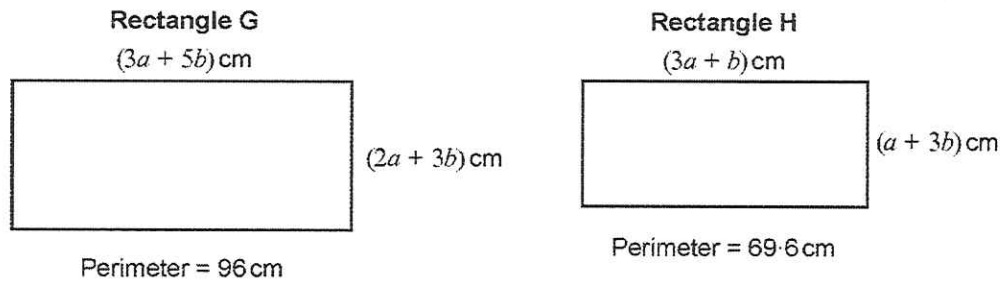
Form and solve simultaneous equations to calculate the dimensions of the smaller rectangle. Give your answers correct to 1 decimal place.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slightly textured appearance and is set against a dark background.

[8]

10.

The dimensions and perimeters of two rectangles, G and H, are shown below.



Diagrams not drawn to scale

Freya has written an equation for rectangle G:

$$10a + 16b = 96$$

- (a) Write down an equation for rectangle H. [1]

[illegible]

- (b) Use an algebraic method to calculate a and b .
Hence, calculate the dimensions of rectangle H. [5]

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Length of rectangle H is cm

Width of rectangle H is cm

[5]

1. **QUESTION**
 2. **ANSWER**
 3. **QUESTION**
 4. **ANSWER**
 5. **QUESTION**
 6. **ANSWER**
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 94. **ANSWER**
 95. **QUESTION**
 96. **ANSWER**
 97. **QUESTION**
 98. **ANSWER**
 99. **QUESTION**
 100. **ANSWER**

[5]

1. The first part of the document is a title page. It contains the title "The Role of the State in the Development of the Economy" and the author's name "John Doe".

2. The second part of the document is an abstract. It provides a brief summary of the main findings of the study.

3. The third part of the document is the introduction. It discusses the importance of the state in the development of the economy and the objectives of the study.

4. The fourth part of the document is the literature review. It examines the existing research on the role of the state in the development of the economy.

5. The fifth part of the document is the methodology. It describes the research methods used in the study.

6. The sixth part of the document is the results and discussion. It presents the findings of the study and discusses their implications.

7. The seventh part of the document is the conclusion. It summarizes the main findings of the study and provides recommendations for future research.

8. The eighth part of the document is the references. It lists the sources used in the study.

9. The ninth part of the document is the appendix. It contains additional information related to the study.

10. The tenth part of the document is the index. It provides a list of the topics covered in the document.

Price of a pencil =