| Name | Class |
|---|---|
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MATHS TEACHER HUB

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# Prime factors

## (9 – 1) Topic booklet

# Higher

**These questions have been collated from previous years GCSE Mathematics papers.**

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

## Instructions

•Use **black** ink or ball-point pen.
•**Fill in the boxes** at the top of this page with your name, centre number and candidate number.
•Answer **all** questions.
•Answer the questions in the spaces provided
– *there may be more space than you need*.
•Diagrams are NOT accurately drawn, unless otherwise indicated.
•You must **show all your working out.**
•If the question is a **1H** question you are not allowed to use a calculator.
•If the question is a **2H** or a **3H** question, you may use a calculator to help you answer.

**Information**

•The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question*.

**Advice**

•Read each question carefully before you start to answer it.
•Keep an eye on the time.
•Try to answer every question.
•Check your answers if you have time at the end.

**Answer ALL questions**
**Write your answers in the space provided.**
**You must write down all the stages in your working.**

**1** Write 84 as a product of its prime factors.

.....

**(2)**



**(Total for Question 1 is 2 marks)**

**1** Write 500 as a product of powers of its prime factors.

November 2022 – Paper 1H **(Total for Question 1 is 3 marks)**

**1** Write 36 as a product of its prime factors.

November 2017 – Paper 1H **(Total for Question 1 is 2 marks)**

**2** (a) Write 90 as a product of its prime factors.

.....

**(2)**

$A = 2^2 \times 3$

$B = 2 \times 3^2$

(b) Write down the lowest common multiple (LCM) of $A$ and $B$.

.....

**(1)**



**(Total for Question 2 is 3 marks)**

**2** Write 124 as a product of its prime factors.

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June 2022 – Paper 1H **(Total for Question 2 is 2 marks)**

**2** Express 56 as the product of its prime factors.

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May 2017 – Paper 1H **(Total for Question 2 is 2 marks)**

**2** Write 60 as a product of its prime factors.

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June 2023 – Paper 2H **(Total for Question 2 is 2 marks)**