

Name

Class

# MATHS TEACHER HUB

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## Factorise

(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 **1F** question you are not allowed to use a calculator.
- If the question is a **2F** or a **3F** 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** Factorise fully  $15x^3 + 3x^2y$

.....  
(2)

June 2022 – Paper 2H

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

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**1** Factorise fully  $9x^2 + 6x$

.....  
(2)

November 2019 – Paper 3H

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

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**1** Factorise  $y^2 + 27y$

.....  
(1)

Specimen 2 – Paper 1H

**(Total for Question 1 is 1 mark)**

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6 Factorise  $x^2 + 3x - 4$

Specimen 1 – Paper 3H

(Total for Question 6 is 2 marks)

9 Factorise  $y^2 + 7y + 6$

(2)

Sample 1 – Paper 3H

(Total for Question 9 is 2 marks)

10 Factorise fully  $50 - 2y^2$

(2)

November 2018 – Paper 1H

(Total for Question 10 is 2 marks)

**13** Factorise  $(x + y)^2 + 3(x + y)$

.....  
(1)

November 2019 – Paper 1H

**(Total for Question 13 is 1 mark)**

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**14** Factorise fully  $4p^2 - 36$

.....  
(2)

June 2022 – Paper 3H

**(Total for Question 14 is 2 marks)**

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**15** Factorise  $a^2 - b^2$

.....  
(1)

June 2018 – Paper 1H

**(Total for Question 15 is 1 mark)**

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**16** Factorise fully  $20x^2 - 5$

.....  
Sample 1 – Paper 1H

**(Total for Question 16 is 2 marks)**

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