Name	Class

🎓 MATHS TEACHER HUB

www.MathsTeacherHub.com

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 **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   Factorise fully $15x^3 + 3x^2y$

....

(2)

(Total for Question 1 is 2 marks)

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

....

(2)

(Total for Question 1 is 2 marks)

1   Factorise fully $6x^2 + 15x$

....

(2)

(Total for Question 1 is 2 marks)

1   Factorise $y^2 + 27y$

....
(1)

     (Total for Question 1 is 1 mark)

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

....

     (Total for Question 6 is 2 marks)

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

....
(2)

     (Total for Question 9 is 2 marks)

10   Factorise fully $50 - 2y^2$

....
(2)

     (Total for Question 10 is 2 marks)

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

....
(1)

(Total for Question 13 is 1 mark)

14 Factorise fully $4p^2 - 36$

....
(2)

(Total for Question 14 is 2 marks)

15 Factorise $3k^2 + 11k - 4$

....
(2)

(Total for Question 15 is 2 marks)

15   Factorise $a^2 - b^2$

....

(1)

(Total for Question 15 is 1 mark)

15   Factorise $a^2 - b^2$

....

(1)

(Total for Question 15 is 1 mark)

16 Factorise fully $20x^2 - 5$

....

(Total for Question 16 is 2 marks)

17 (a) Factorise $6x^2 - 5x - 4$

....

(2)

(b) Hence, or otherwise, solve $6x^2 - 5x - 4 < 0$

....

(2)

(Total for Question 17 is 4 marks)