Name ANSWERS	Class

MATHS TEACHER HUB

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Factorising

(9 – 1) Topic booklet

Foundation

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.

13 Factorise $8d - 6$

$2(4d-3)$

(1)

June 2023 – Paper 1F **(Total for Question 13 is 1 mark)**

14 (a) Factorise $5 - 10m$

$5(1-2m)$

(1)

(b) Factorise fully $2a^2b + 6ab^2$

$2ab(a+3b)$

(2)

June 2017 – Paper 2F **(Total for Question 14 is 3 marks)**

15 Factorise $6y^2 - 5y$

$y(6y-5)$

(1)

November 2021 – Paper 1F **(Total for Question 15 is 1 mark)**

16 Factorise $3n + 12$

$3(n+4)$

(1)

June 2019 – Paper 1F **(Total for Question 16 is 1 mark)**

17 Factorise $10x - 15$

$5(2x-3)$

(1)

Specimen 2 – Paper 2F **(Total for Question 17 is 1 mark)**

17 Factorise $4a - 6$

$2(2a-3)$

(1)

November 2021 – Paper 3F **(Total for Question 17 is 1 mark)**

17 Factorise $4p + 6$

$2(2p+3)$

(1)

June 2022 – Paper 3F **(Total for Question 17 is 1 mark)**

19 Factorise $15y - 10$

$5(3y-2)$

(1)

May 2020 – Paper 1F **(Total for Question 19 is 1 mark)**

19 Factorise $y^2 + 27y$

$y(y+27)$

(1)

Specimen 2 – Paper 1F **(Total for Question 19 is 1 mark)**

19 Factorise fully $9b - 3b^2$

$3b(3-b)$

(2)

November 2018 – Paper 2F **(Total for Question 19 is 2 marks)**

20 (a) Factorise $3f + 9$

$3(f+3)$

(1)

(b) Factorise $x^2 - 2x - 15$

$(x+3)(x-5)$

(2)

Sample 1 – Paper 2F **(Total for Question 20 is 3 marks)**

21 (a) Factorise $6x - 15$

$3(2x-5)$

(1)

(b) Factorise $m^2 + 5m$

$m(m+5)$

(1)

June 2024 – Paper 3F **(Total for Question 21 is 2 marks)**

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

$3x^2(5x+y)$

(2)

June 2022 – Paper 2F **(Total for Question 21 is 2 marks)**

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

$3x(3x+2)$

(2)

November 2019 – Paper 3F **(Total for Question 22 is 2 marks)**

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

$3x(2x+5)$

(2)

November 2023 – Paper 2F

(Total for Question 22 is 2 marks)

24 Factorise $x^2 + 6x + 9$

$(x+3)(x+3)$

(1)

November 2017 – Paper 2F

(Total for Question 24 is 1 mark)

26 Factorise $x^2 + 4x + 3$

$(x+1)(x+3)$

(2)

November 2018 – Paper 2F

(Total for Question 26 is 2 marks)

26 Factorise $x^2 + 10x + 9$

$(x+1)(x+9)$

(2)

November 2022 – 1F **(Total for Question 26 is 2 marks)**

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

$(x-1)(x+4)$

Specimen 1 – Paper 3F **(Total for Question 26 is 2 marks)**

27 Factorise $x^2 - 16$

$(x+4)(x-4)$

(1)

November 2023 – Paper 1F **(Total for Question 27 is 1 mark)**