

Name: \_\_\_\_\_

**ASM Tuition Academy**  
**FACTORISING HARDER QUADRATICS**

**Instructions:**

- Use **black** ink or ball-point pen.
- 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 you're working out**.

**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 time.
- Try to answer every question.
- Check your answers if you have time at the end.

1. Factorize  $2x^2 + 7x + 3$

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(Total for question 1 is 2 marks)

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2. Factorize  $3x^2 - 10x + 3$

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(Total for question 2 is 2 marks)

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**3. Solve  $4x^2 + 11x + 6$**

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**(Total for question 3 is 3 marks)**

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**4. Factorize  $5x^2 + 16x + 3$**

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**(Total for question 4 is 2 marks)**

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5. Factorize  $6x^2 + 17x + 5$

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(Total for question 5 is 2 marks)

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6. Solve  $x^2 - 7x + 12$

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(Total for question 6 is 3 marks)

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7. Factorize  $x^2 - 10x + 24$

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(Total for question 7 is 2 marks)

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8. Factorize  $x^2 + 3x - 18$

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(Total for question 8 is 2 marks)

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**9. Solve  $5x^2 + 19x + 12$**

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**(Total for question 9 is 3 marks)**

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**10. Factorize  $6x^2 + 13x + 6$**

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**(Total for question 10 is 2 marks)**

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**11. Factorize  $12x^2 + 7x - 12$**

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**(Total for question 11 is 2 marks)**

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**12. Solve  $15x^2 - 11x - 12$**

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**(Total for question 12 is 3 marks)**

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**13. Factorize  $10x^2 + 19x - 5$**

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**(Total for question 13 is 2 marks)**

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**14. Factorize  $8x^2 - 22x + 15$**

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

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**15. Solve  $12x^2 - 17x + 6$**

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**(Total for question 15 is 3 marks)**

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**16. Factorize fully  $2x^2 - 72$**

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

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**17. Factorize fully  $3x^2 - 27$**

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**(Total for question 17 is 2 marks)**

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**18. Solve  $5x^2 - 125 = 0$**

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**(Total for question 18 is 3 marks)**

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**19. Factorize  $a^2 + 2ab + b^2$**

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**(Total for question 19 is 2 marks)**

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**20. Factorize  $6x^2 + 11xy - 10y^2$**

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**(Total for question 20 is 2 marks)**

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**21. Factorize  $12x^2 + 17xy - 5y^2$**

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**(Total for question 21 is 2 marks)**

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