Name: _____

ASM Tuition Academy

Solving 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. **Factorise**
   a) $9x^2 + 11x + 2$

   _____

   b) **Solve** $9x^2 + 11x + 2 = 0$

   _____

   (Total for question 1 is 3 marks)

2. **Factorise**
   a) $w^2 + 2w - 3$

   _____

   b) **Solve** $w^2 + 2w - 3 = 0$

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   (Total for question 2 is 3 marks)

3. **Factorise**

a) $b^2 - 17b + 63$

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b) **Solve** $b^2 - 17b + 63 = 0$

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(Total for question 3 is 3 marks)

4. **Factorise**

a) $6f^2 + 20f + 6$

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b) **Solve** $6f^2 + 20f + 6 = 0$

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(Total for question 4 is 3 marks)

5. **Factorise**

a) $2x^2 + 10x + 12$

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b) **Solve** $2x^2 + 10x + 12 = 0$

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(Total for question 5 is 3 marks)

6. **Factorise**

a) $3y^2 + 8y - 3$

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b) **Solve** $3y^2 + 8y \_ 3 = 0$

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(Total for question 6 is 3 marks)

7. **Solve** $12y^2 - y - 6 = 0$

8. **Solve** $x^2 + 2x - 15 = 0$

9. **Solve** $4y^2 - 18y + 20 = 0$

10. **Solve** $2z^2 + z - 3 = 0$

11. Solve $x^2 + x - 20 = 0$

(Total for question 11 is 3 marks)

12. Solve $14y^2 - 3y - 5 = 0$

(Total for question 12 is 3 marks)

13. Solve $21y^2 + 2y - 3 = 0$

(Total for question 13 is 3 marks)

14. Solve $4(x^2 + 10x + 16) = 0$

(Total for question 14 is 3 marks)

15. Solve $x^2 - 36 = 0$

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(Total for question 15 is 3 marks)

16. Solve $y^2 - 14y + 45 = 0$

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(Total for question 16 is 3 marks)

17. Solve $x^2 + 10x + 25 = 0$

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(Total for question 17 is 3 marks)

18. Solve $3x^2 + 7x + 2 = 0$

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(Total for question 18 is 3 marks)