

Name:

Exam Style Questions

Factorising Quadratics



Equipment needed: Calculator, pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Videos 118, 119, 120



Answers and Video Solutions



1. Factorise $x^2 + x - 6$



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(2)

2. Factorise $x^2 + 5x + 6$



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(2)

3. Factorise $x^2 + 9x + 20$



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(2)

4. Factorise $x^2 + 10x + 9$



.....
(2)

5. Factorise $x^2 - 7x + 12$



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(2)

6. Factorise $x^2 - 2x - 24$



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(2)

7. Factorise $x^2 - 6x - 27$



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(2)

8. Factorise $x^2 - 36$



.....
(2)

9. Factorise $x^2 + 5x - 24$



.....
(2)

10. Factorise $x^2 + 8x + 16$



.....
(2)

11. Factorise $x^2 - 121$



.....
(2)

12. Factorise $x^2 + 7x - 78$



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(2)

13. Factorise $x^2 + 4x - 12$



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(2)

14. Factorise $x^2 - 25$



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(2)

15. Factorise $y^2 - 9y + 14$



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(2)

16. Factorise $49 - y^2$



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(2)

17. Factorise $y^2 - 9w^2$



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(2)

18. Factorise $x^2 - 38x + 72$



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(2)

19. Factorise $x^2 + 14x - 51$



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(2)

20. Factorise $y^2 + 32y + 240$



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(2)

21. Factorise $y^2 - 12y - 64$



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(2)

22. Freddy has been asked to factorise $x^2 - 11x + 30$



His answer is $(x + 5)(x + 6)$

Explain his mistake.

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.....
(2)

23. A quadratic expression, $x^2 + ax + 24$, can be factorised.



a is a positive integer.

How many possible values are there for a ?

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(3)

24. Factorise $2y^2 + 7y - 15$



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(2)

25. Factorise fully $2y^2 - 50$



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(2)

26. Factorise $y^2 - 13y + 36$



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(2)

27. Factorise $2w^2 - 9w + 4$



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(2)

28. Factorise $2x^2 + 5x + 2$



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(2)

29. Factorise $2y^2 + 7y - 15$



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(2)

30. Factorise $3y^2 + 10y - 8$



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(2)

31. Factorise $5x^2 - 13x - 6$



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(2)

32. Factorise $7x^2 - 19x + 12$



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(2)

33. Factorise $6w^2 - 11w - 10$



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(3)

34. Factorise $7x^2 + 8x + 1$



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(2)

35. Factorise $8y^2 + 10y - 3$



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(3)

36. Factorise $24y^2 + 19y + 2$



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(3)

37. Factorise $6w^2 - 7w - 10$



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(3)

38. A quadratic expression, $5x^2 + ax + 9$, can be factorised.



a is an integer.

How many possible values are there for a ?

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(3)

39. Factorise $10x^2 + 119x - 75$



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(3)

40. Factorise $3x^2 + 4xy + y^2$



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(3)

41. Factorise $7x^2 + 20xy - 3y^2$



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(3)

42. Factorise fully $(x + 4)^2 + 3(x + 4)$



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(2)

43. (a) Factorise $10x^2 + 9x + 2$



.....
(2)

(b) Hence factorise $10(y - 3)^2 + 9(y - 3) + 2$

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(3)