



SCAN ME

# Solving Quadratics by Completing the Square



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REVISE THIS TOPIC

CHECK YOUR ANSWERS

- 1 By completing the square, solve the equation  $x^2 - 4x + 1 = 0$   
 Give your answers in the form  $a \pm \sqrt{3}$ , where  $a$  is an integer.  
 You must show all your working.



(Total for Question 1 is 4 marks)

- 2 By completing the square, solve the equation  $x^2 - 10x + 19 = 0$   
 Give your answers in the form  $a \pm \sqrt{6}$ , where  $a$  is an integer.  
 You must show all your working.



(Total for Question 2 is 4 marks)



- 3 By completing the square, solve the equation  $x^2 + 6x - 1 = 0$   
Give your answers in the form  $a \pm \sqrt{10}$ , where  $a$  is an integer.  
You must show all your working.



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(Total for Question 3 is 4 marks)

- 4 By completing the square, solve the equation  $x^2 - 2x - 4 = 0$   
Give your answers in the form  $a \pm \sqrt{5}$ , where  $a$  is an integer.  
You must show all your working.



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(Total for Question 4 is 4 marks)

- 5 By completing the square, solve the equation  $x^2 + 20x + 93 = 0$   
Give your answers in the form  $a \pm \sqrt{7}$ , where  $a$  is an integer.  
You must show all your working.



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(Total for Question 5 is 4 marks)



- 6 By completing the square, solve the equation  $x^2 - 4x - 4 = 0$   
Give your answers in the form  $a \pm b\sqrt{2}$ , where  $a$  and  $b$  are integers.  
You must show all your working.



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(Total for Question 6 is 4 marks)

- 7 By completing the square, solve the equation  $x^2 - 10x - 50 = 0$   
Give your answers in the form  $a \pm b\sqrt{3}$ , where  $a$  and  $b$  are integers.  
You must show all your working.



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(Total for Question 7 is 4 marks)

- 8 By completing the square, solve the equation  $x^2 - 16x - 26 = 0$   
Give your answers in the form  $a \pm b\sqrt{10}$ , where  $a$  and  $b$  are integers.  
You must show all your working.



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(Total for Question 8 is 4 marks)



9 By completing the square, solve the equation  $x^2 + 15x + 21 = 3x - 9$   
Give your answers in the form  $a \pm \sqrt{b}$ , where  $a$  is an integer.  
You must show all your working.



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(Total for Question 9 is 5 marks)

10 By completing the square, solve the equation  $x^2 - 6x + 4 = 5 - 2x$   
Give your answers in the form  $a \pm \sqrt{b}$ , where  $a$  is an integer.  
You must show all your working.



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(Total for Question 10 is 5 marks)

11 By completing the square, solve the equation  $x^2 + 3x + 7 = 9x + 6$   
Give your answers in the form  $a \pm b\sqrt{2}$ , where  $a$  and  $b$  are integers.  
You must show all your working.



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(Total for Question 11 is 5 marks)

