

# Equations with Brackets and Unknowns on Both Sides

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name \_\_\_\_\_

Total marks: **32**

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Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

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**1** Solve  $3(2x - 1) = 21$

$x = \dots\dots\dots$   
(2)

**(Total for Question 1 is 2 marks)**

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**2** Solve  $5(x + 3) = 40$

$x = \dots\dots\dots$   
(2)

**(Total for Question 2 is 2 marks)**

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**3** Solve  $7x - 10 = 38 - x$

$x = \dots\dots\dots$   
(3)

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

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**4** Solve  $6x + 5 = 2x + 21$

$x = \dots\dots\dots$   
(2)

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

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**5** Solve  $4(x + 3) = 2x + 20$

$x = \dots\dots\dots$   
(3)

**(Total for Question 5 is 3 marks)**

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**6** Solve  $3(2y + 1) = 2(y + 9)$

$y = \dots\dots\dots$   
(3)

**(Total for Question 6 is 3 marks)**

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**7** Solve  $\frac{x + 11}{2} = 5 - x$

$x = \dots\dots\dots$   
(3)

**(Total for Question 7 is 3 marks)**

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**8** Solve  $9 - 2x = 3x - 11$

$x = \dots\dots\dots$   
(2)

**(Total for Question 8 is 2 marks)**

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- 9 The two base angles of an isosceles triangle are  $(2x + 10)^\circ$  and  $(5x - 20)^\circ$ .  
Work out the value of  $x$ .

$x = \dots\dots\dots$   
(2)

**(Total for Question 9 is 2 marks)**

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- 10 Every sheet of stickers has the same number of stickers.  
Freya has 4 sheets of stickers and 3 loose stickers.  
Omar has 2 sheets of stickers and 15 loose stickers.  
Freya and Omar have the same number of stickers.

(a) Work out the number of stickers on one sheet.

$\dots\dots\dots$   
(2)

(b) Freya and Omar sell all of their stickers for 5p each.  
Work out the total amount of money they get.  
Give your answer in pounds.

£  $\dots\dots\dots$   
(2)

**(Total for Question 10 is 4 marks)**

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- 11** Show that  $x = 2$  is the solution of  $4(x + 1) = 2(x + 5) - 2$

(2)

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

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- 12** Tom solves  $3(x - 2) = 12$

$$3x - 2 = 12$$

$$3x = 14$$

$$x = \frac{14}{3}$$

Explain the mistake Tom has made.

(1)

**(Total for Question 12 is 1 mark)**

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- 13** Ann is 3 times as old as Beth.  
In 10 years' time, Ann will be twice as old as Beth.  
Work out Beth's age now.

..... years

(3)

**(Total for Question 13 is 3 marks)**

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