

GCSE Maths: Equations with brackets (Foundation): worksheet

GCSE Maths - Linear Equations - Foundation - Lesson 9.5

Name: _____

Date: _____

Score: _____

12 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/gcse/maths/ch09-linear-equations/foundation/equations-with-brackets/

Exercise 9E Equations with brackets Non-calculator

1 Solve these equations. Each bracket has a plus sign.

(a) $2(x + 3) = 14$

Answer: _____

(b) $3(x + 1) = 18$

Answer: _____

(c) $5(x + 2) = 35$

Answer: _____

(d) $4(x + 5) = 36$

Answer: _____

(e) $6(x + 1) = 30$

Answer: _____

(f) $2(x + 9) = 30$

Answer: _____

2 Solve these equations. Each bracket has a minus sign.

(a) $3(x - 2) = 15$

Answer: _____

(b) $2(x - 4) = 10$

Answer: _____

(c) $5(x - 1) = 20$

Answer: _____

(d) $4(x - 3) = 8$

Answer: _____

(e) $3(2x + 1) = 21$

Answer: _____

(f) $2(3x - 4) = 22$

Answer: _____

3 Solve these equations. Expand the bracket first.

(a) $3(x + 2) + 4 = 19$

Answer: _____

(b) $2(x + 5) - 3 = 19$

Answer:

(c) $4(x - 1) + 7 = 23$

Answer:

(d) $5(x + 2) - 8 = 27$

Answer:

(e) $2(2x + 1) + 5 = 19$

Answer:

(f) $3(x - 4) + 2 = 8$

Answer:

4 Solve these equations. There is a bracket on one side and x on the other.

(a) $3(x + 2) = 2x + 9$

Answer:

(b) $4(x - 1) = 2x + 8$

Answer:

(c) $2(x + 5) = x + 14$

Answer:

(d) $5(x - 3) = 3x + 1$

Answer:

(e) $3(2x + 1) = 4x + 11$

Answer:

(f) $2(3x - 2) = 5x + 3$

Answer:

5 Solve these equations. There are brackets on both sides.

(a) $5(x - 2) = 3(x + 4)$

Answer:

(b) $2(x + 7) = 4(x + 1)$

Answer:

(c) $4(x - 1) = 3(x + 2)$

Answer:

(d) $4(x + 3) = 3(x + 6)$

Answer:

(e) $6(x - 2) = 2(x + 8)$

Answer:

(f) $5(2x - 1) = 3(3x + 1)$

Answer:

6 Solve these equations. Be careful with the minus signs in front of the brackets.

(a) $10 - (x + 2) = 5$

Answer:

(b) $7 - 2(x - 1) = 3$

Answer:

(c) $20 - 3(x + 1) = 2$

Answer:

(d) $5 - (x - 3) = 1$

Answer:

(e) $12 - 2(x + 3) = 4$

Answer:

(f) $9 - 3(x - 2) = 6$

Answer:

- 7 Jo expands $3(x - 4)$ and gets $3x - 4$. Explain her mistake. Then solve $3(x - 4) = 15$.

Answer:

- 8 I think of a number, add 4 and then multiply the result by 3. My answer is 33. What number did I think of?

Answer:

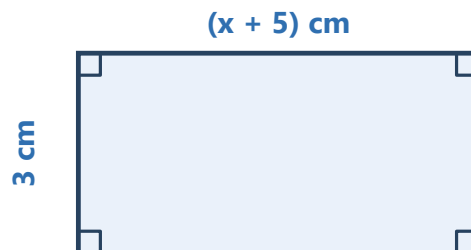
- 9 At a museum, a child ticket costs £3 less than an adult ticket. Two adult tickets and three child tickets cost £41 altogether. Work out the cost of an adult ticket.

Answer:

- 10 Show that $x = 4$ is the solution of $2(3x - 5) = 5x - 6$.

Answer:

- 11 The area of this rectangle is 36 cm^2 . Work out the value of x .



Answer:

- 12 Solve these equations.

(a) $2(x + 3) = 10$

Answer:

(b) $3(x - 1) = 12$

Answer:

(c) $4(x + 2) = 20$

Answer:

