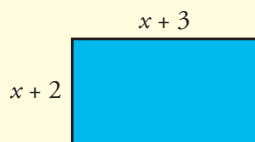


 chapter 19 review

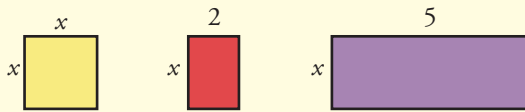
1. (a) ✎ Solve the equation $x(x - 10) = 0$. Check your solutions.
(b) ✎ Factorise $x^2 - 6x$. Hence, solve the equation $x^2 - 6x = 0$. Check your solutions.
(c) ✎ One number is 5 less than another number. When the two numbers are multiplied by each other, the result is 14. Find the two numbers.
2. (a) ✎ Solve the equation $x(x + 15) = 0$. Check your solutions.
(b) ✎ Factorise $x^2 - 4x - 12$. Hence, solve the equation $x^2 - 4x - 12 = 0$. Check your solutions.
(c) ✎ When four times a number is added to its square, the result is 21. Find the number.
3. (a) ✎ Solve the equation $(x - 7)(x - 9) = 0$. Check your solutions.
(b) ✎ Solve the equation $x^2 - 10x = -25$. Check your solution.
(c) ✎ The perimeter of the rectangle shown is 36 cm and its area is 32 cm^2 . Find the length of the two sides.



4. (a) ✎ Solve the equation $(x + 3)(x - 3) = 0$. Check your solutions.
(b) ✎ Factorise $x^2 - 12x$. Hence, solve the equation $x^2 - 12x = 0$. Check your solutions.
(c) ✎ A rectangle with an area of 12 cm^2 has sides $(x + 2)$ cm and $(x + 3)$ cm as shown in the diagram.
Find (i) the value of x (ii) the perimeter of the rectangle.



5. (a) \neq Solve the equation $(x-7)(x-7) = 0$.
- (b) \neq Factorise $x^2 - 144 = 0$. Hence, solve $x^2 - 144 = 0$.
Check your solutions.
- (c) \neq A factory makes three types of tiles. The length of the sides of the tiles are shown.



- (i) Find the area of each shape in terms of x .
- (ii) If the total area of the tiles is 170 cm^2 , find the length of the sides of the tiles.
- (iii) Find the perimeter of each tile.
6. (a) \neq Solve the equation $t(t-5) = 0$. Check your solutions.
- (b) \neq Solve the equation $x^2 + 14x + 40 = 0$. Check your solutions.
- (c) \neq By letting $t = x + 1$, use the solutions to the equation in part (b), to solve $(x+1)^2 + 14(x+1) + 40 = 0$.