Forming and Solving Equations

Question 1. Sam is thinking of a number. He adds 7 and gets 15. What is the number?

[3 marks]

Question 2. A number is doubled and the result is 22. What is the number?
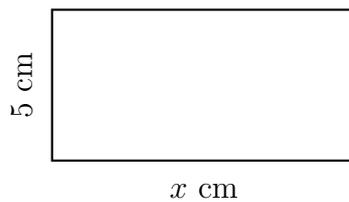
[3 marks]

Question 3. A number is divided by 4 and the result is 6. Find the number.

[3 marks]

Question 4. Katie is 3 years older than Ben. The sum of their ages is 27. How old is Ben?

[3 marks]

Question 5. A rectangle has a length of x cm and width 5 cm. Its perimeter is 26 cm. Find x.
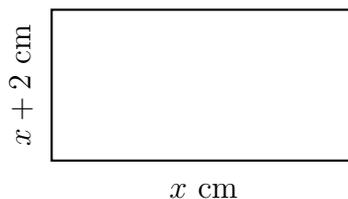
5 cm ▯ x cm

[3 marks]

Question 6. A shape's total area is 48 cm^2. It consists of a rectangle with length x and width $x + 2$. Form and solve an equation.
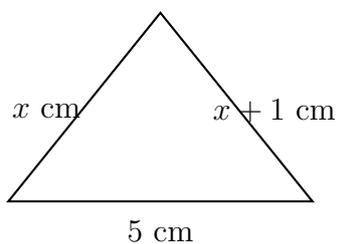
[3 marks]

Question 7. A triangle has side lengths x, $x + 1$, and 5 cm. The perimeter is 21 cm. Find x.

$x + 2$ cm

x cm

[3 marks]

Question 8. A packet of 5 apples and 3 bananas costs £6. A banana costs £0.50. Find the cost of one apple.

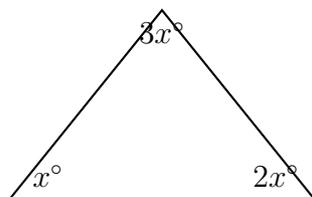x cm $x + 1$ cm

5 cm

[3 marks]

Question 9. A number is added to itself, then 4 is subtracted. The result is 12. What is the number?

[3 marks]

Question 10. The angles in a triangle are x, $2x$, and $3x$. Find the size of each angle.
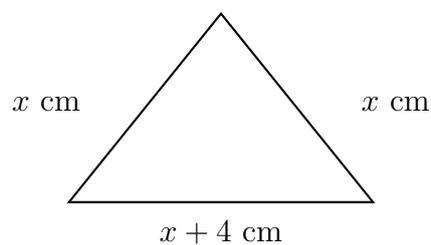
[3 marks]

Question 11. The perimeter of an isosceles triangle is 34 cm. Two sides are x, and the base is $x + 4$. Find x.

[3 marks]

Question 12. A regular polygon has interior angle $(2x+10)°$. The sum of interior angles is $900°$. How many sides does the polygon have?
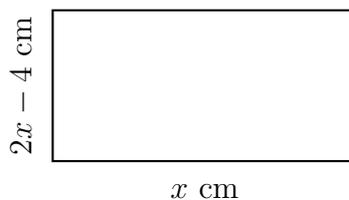

[3 marks]

Question 13. The area of a rectangle is 80 cm^2. One side is x, the other is $2x - 4$. Form and solve an equation.

[3 marks]

Question 14. A shop offers 3 for 2 on a product costing x pounds. You buy 3 and pay £12. Find x.

$2x - 4$ cm ⟷ [rectangle] ⟷ x cm

[3 marks]

Question 15. Two consecutive odd numbers are multiplied and the result is 143. Find the numbers.
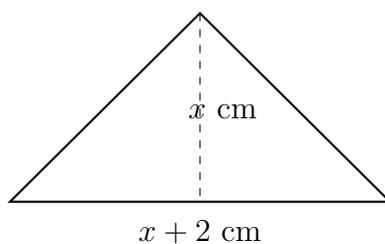
[3 marks]

Question 16. The sum of three consecutive integers is 81. What are the numbers?

[3 marks]

Question 17. A triangle has height x and base $x + 2$. Its area is 24 cm². Find x.

[3 marks]

Question 18. The exterior angle of a regular polygon is $dfrac360x$. The interior angle is three times the exterior angle. Find x.

x cm

$x + 2$ cm

[3 marks]

Question 19. A square and a rectangle have the same perimeter. The square has side x. The rectangle has length $x + 2$ and width $x - 1$. Find x.

[3 marks]