1. A number is squared and added to three times the number to give a total of 18. Find all possible values for the number.

2. The sum of five times the square of a number and four times the number is 28. Find two possible values for the number.

3. One number is three more than the other number. The sum of their squares is 65. Find two pairs of numbers for which this is true.

4. Find two consecutive natural numbers whose product is 56. (Let the numbers be x and $x + 1$)

5. When a number,x, is added to its square, the answer is 72. Write an equation in x and solve it to find two numbers. Verify that both numbers satisfy the equation.

6. The length of a rectangle is 5m more than its width. Its area is $234m^2$. Find the dimensions of the rectangle.

7. If a positive number is subtracted from its square, the result is 90. What is the number?

8. The square of a number is eight more than seven times the number. Find the number.

9. One positive number is 3 bigger than another number. If the two numbers are multiplied together, the answer is 88. Find the two numbers.

10. $2n$ and $(2n + 2)$ are two consecutive even natural numbers. Their product is 168. Write down an equation in n and, hence, find the smaller number.

11. The area of the given rectangle is $77cm^2$. Find its length and breadth.
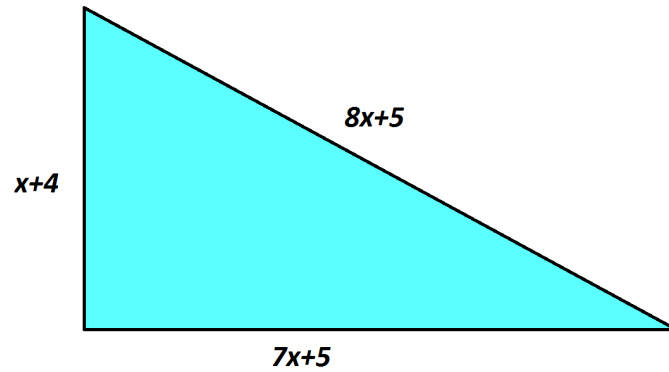
(x+4)cm

x cm
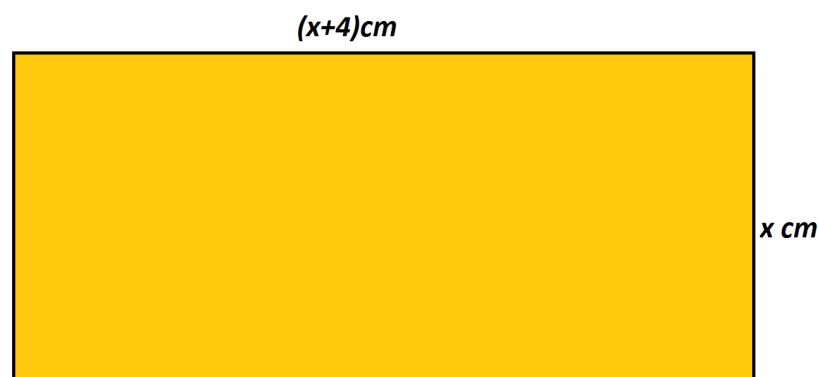
12. The dimensions of a garden are $10m$ by $12m$. It is surrounded by a uniform path which is $48m^2$ in area. Find the width of this path.
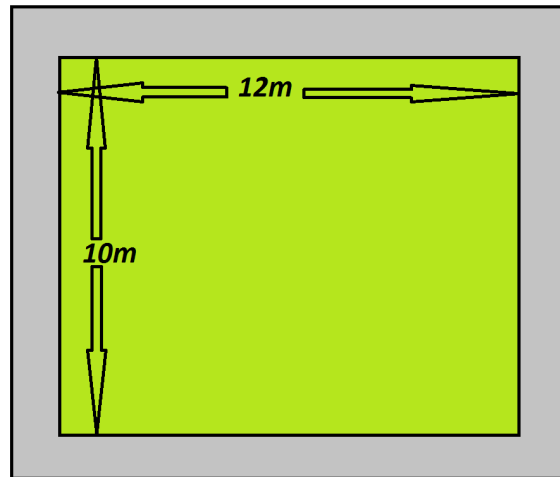

13. State the Theorem of Pythagoras. Now use this theorem to find the value of x in the given right angled triangle..
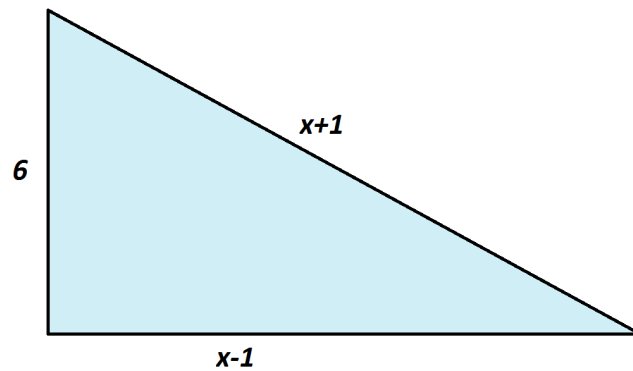
14. The sides of a right-angled are shown. Using the theorem of Pythagoras, find the length of all three sides.

15. The diagram shows a rectangular lawn surrounded on three sided by flower beds. Each flower bed is $2m$ wide. The area of the lawn is $14m^2$. Find the length of the lawn.
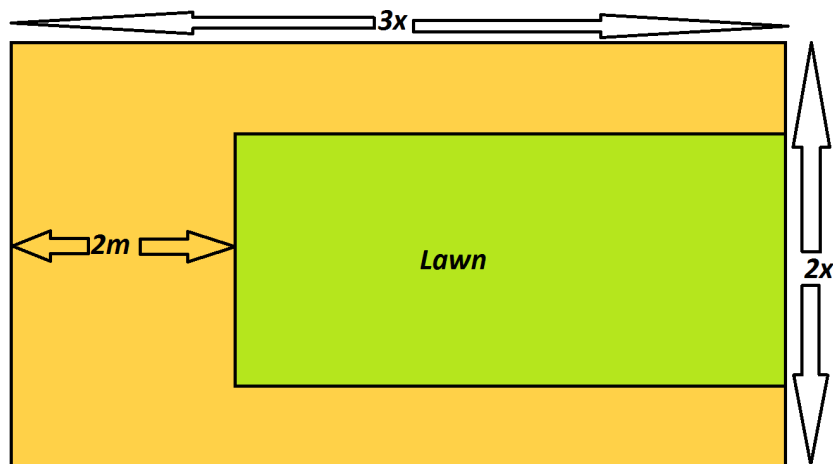
16. A net of an open rectangular box is shown. If the area of the base of the box is $110cm^2$, find the volume of the box.
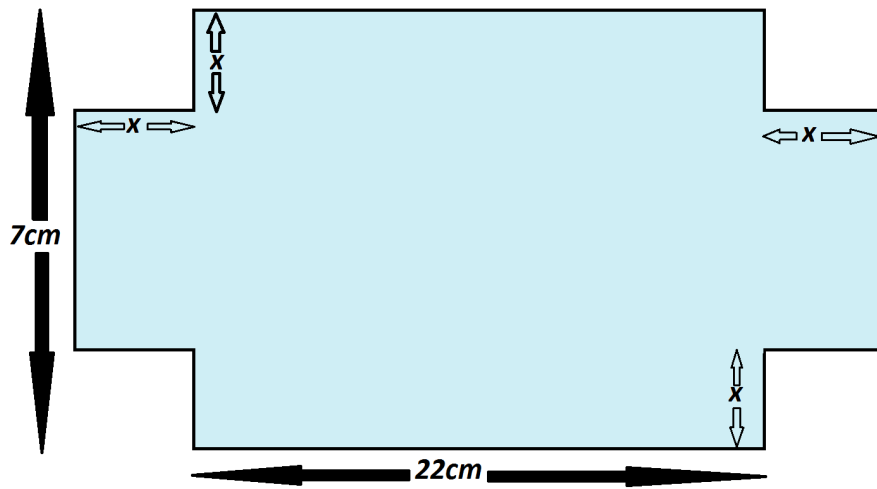
17. The area of the given triangle is 40 square units, find the value of x.