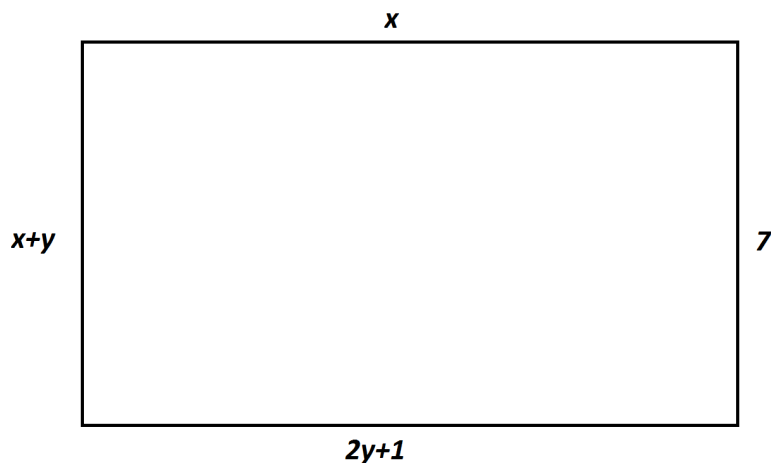


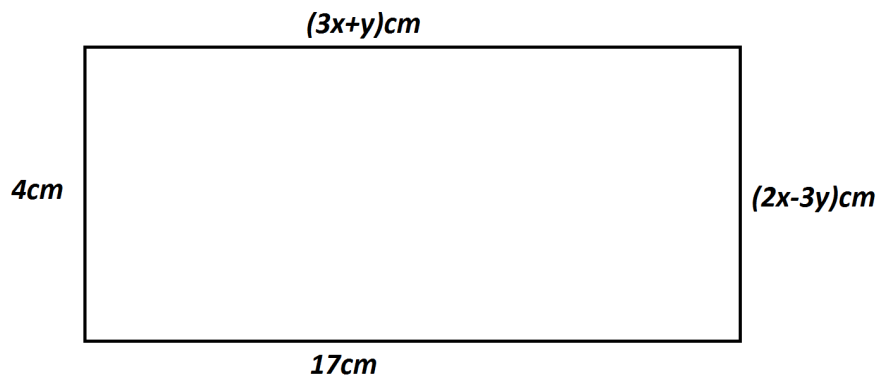
Word Problems: Simultaneous Equations

1. The sum of two numbers is 25. Twice the first number plus the second number is equal to 35. Find the two numbers.
2. The sum of two numbers is 20. The difference between the two numbers is 5. Find the two numbers.
3. The sum of two numbers is 35. The first is 11 greater than the second. Find the two numbers.
4. Three soft drinks and six bars cost 9. Five soft drinks and two bars cost €11. Write down two equations and hence find the cost of each item.
5. A pen and a pencil cost €1. Four pens and two pencils cost €3.40. Write down two equations and hence find the cost of each item.
6. A bar and a drink cost €1.90. Five bars and two drinks cost €7.40. Write down the two equations and hence find the cost of each item.
7. The sum of two numbers is 9. If twice the first number is added to three times the second, the answer is 15. Find the two numbers.
8. Find the values of x and y in the following rectangle.



9. The difference of two numbers is 7. When three times the smaller number is taken from twice the larger, the result is 11. Find the two numbers.

10. In an election Alan received 105 more votes than Carol. The total number of votes cast was 735. How many votes did each candidate receive?
11. Find two numbers such that the first number added to three times the second is 31, while three times the first less twice the second is 16.
12. Chris has €99 to spend. He can buy either two computer games and five music CD's or one computer game and 10 music CD's. How much does each item cost?



13. (a) Examine the rectangle shown and write down two equations in x and y .
 (b) Now solve these equations to find the value of x and the values of y
14. Three nuts and six bolts have a combined weight of $72g$. Four nuts and five bolts have a combined weight of $66g$. Find the combined weight of one nut and one bolt.
15. A bag contains 34 coins, all of them either $5c$ or $10c$ coins. If the value of the money in the bag is €2.40, find how many of each coin the bag contains.[hint: Convert €2.40 to cents].
16. In the given two figures all the angles are right angles and the distances are in centimetres. If the area of the figure on the left is $45cm^2$ and the area of the second figure is $25cm^2$, find the values of x and y .
17. The diagram shows a rectangle. All sides are measured in centimetres.
 - i. Write down a pair of simultaneous equations in a and b .
 - ii. Solve your pair of simultaneous equations to find a and b .

