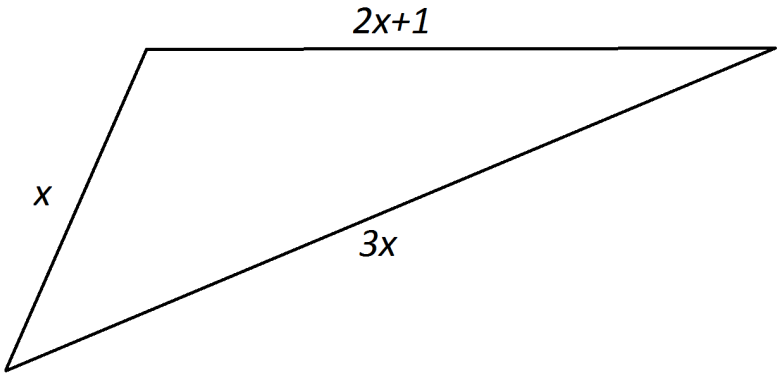
Word Problems, Linear Equations

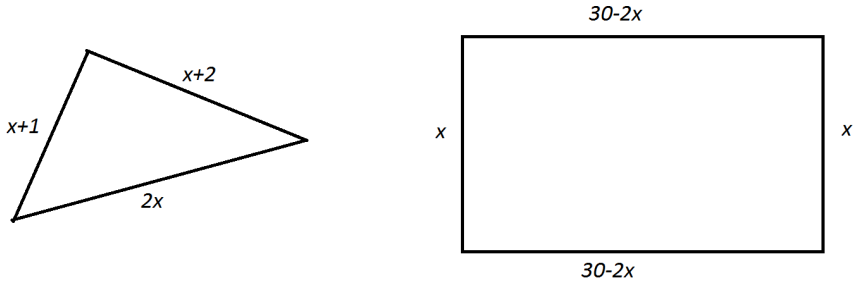
1. If you double a number and add 17, the result is 35. Find the number.
2. When you multiply a number by 4 and subtract 5 you get 79. What is the number?
3. When a number is trebles and 7 is taken away, the result is 26. Find the number.
4. if I multiply a number by 4 and then add 3, the result is the same ass adding 8 to three times the number. Form and equation in x and solve it to find the number.
5. Find two consecutive natural numbers such that eight times the first is 1 less than seven times the second.
6. One number is 5 greater than another number. If the smaller number is added to twice the larger number, the answer is 28. Find the two numbers.
7. Find three consecutive natural numbers such that five times the first is 24 more than the sum of the other two.
8. Ann is 3 years older than Helen. If twice the sum of their ages is 50 years, how old is Ann?
9. Annie is y years old. Her sister is twice as old as her. Their mother is 25 years older than Annie's sister. The total of all their ages is 80. How old is Annie?



10. (a) Find an expression for the perimeter of this triangle.
    (b) What value of x gives a perimeter of 55?.

11. Find two consecutive even numbers such that six times the first is equal to five times the second. [Hint: Let the numbers be n and $(n + 2)$]

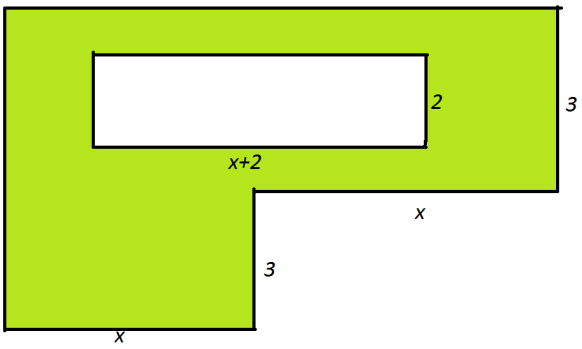
12. A triangle and rectangle are shown below: Find the value of x which,



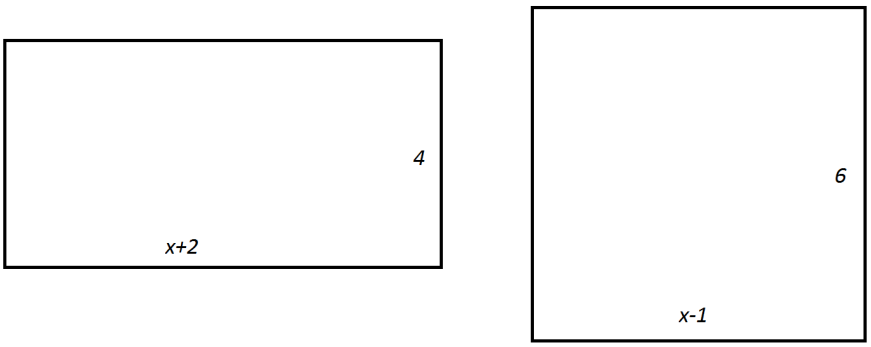
    i. gives a triangle with a perimeter of 63
    ii. gives a triangle and rectangle with equal perimeters
    iii. makes a rectangle into a square.

13. Emily's age is x. Frances is three years older. Their fathers age is twice the sum of their ages. If their three ages add up to 93, find their ages.

14. Find an expression in x for the area of the shaded portion of this figure. If the area of this shaded portion is $38cm^2$, find the value of x.



15. Two rectangles of equal area are shown. Write an equation in terms of x and, using this equation, find all the dimensions of the rectangle.



16. Ruth is x years old. Write, in terms of x,
    i. her age 6 years ago.
    ii. her age in 12 years time.

    In 12 years time, Ruth will be three times as old as she was 6 years ago. Find Ruth's age now.

17. The diagram shows the angles of two triangles. In each case find the value of x, and hence, find the value of the three angles.