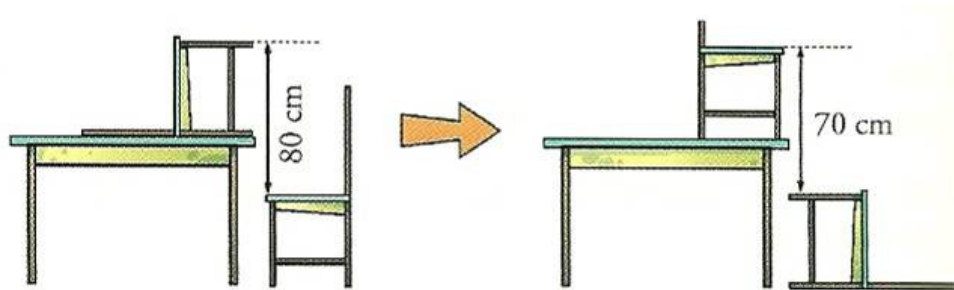


## A TABLE AND TWO CHAIRS (Answer)

What is the height of the table?

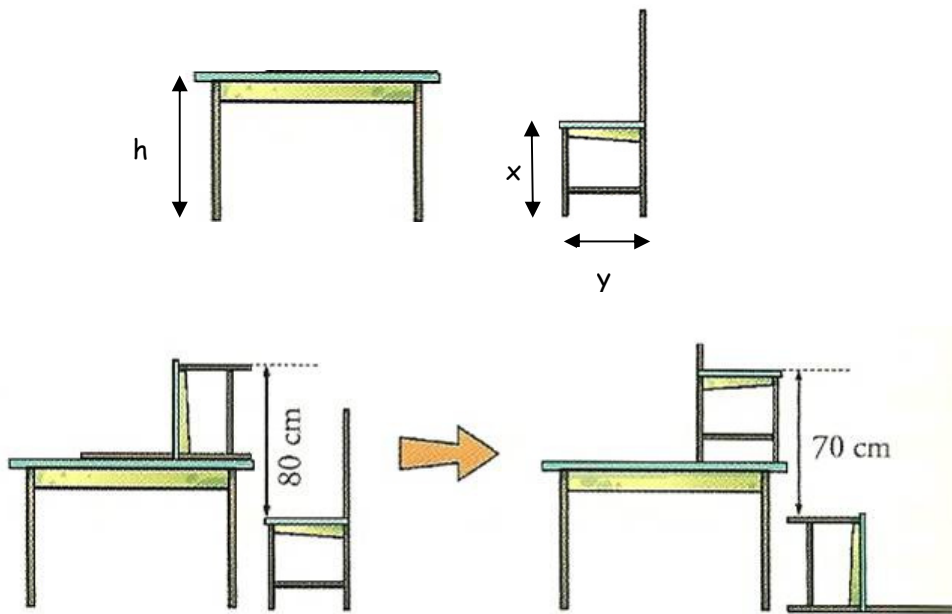
Show your work.



*Tip:* If you use the algebraic language, the problem will be easier.

Answer:

Let the height of the table be  $h$ , the height of the seat be  $x$  and the width of the seat be  $y$ .



You can write one equation for each one of the situations in the picture:

$$h + y = 80 + x$$

$$70 + y = h + x$$

You have two simultaneous equations with three variables:

$$h + y = 80 + x$$

$$70 + y = h + x$$

If you subtract both equations, you can eliminate the variables "x" and "y":

$$h - 70 = 80 - h \Rightarrow h + h = 80 + 70 \Rightarrow 2h = 150 \Rightarrow h = \frac{150}{2} = 75$$

The height of the table will be 75 cm.