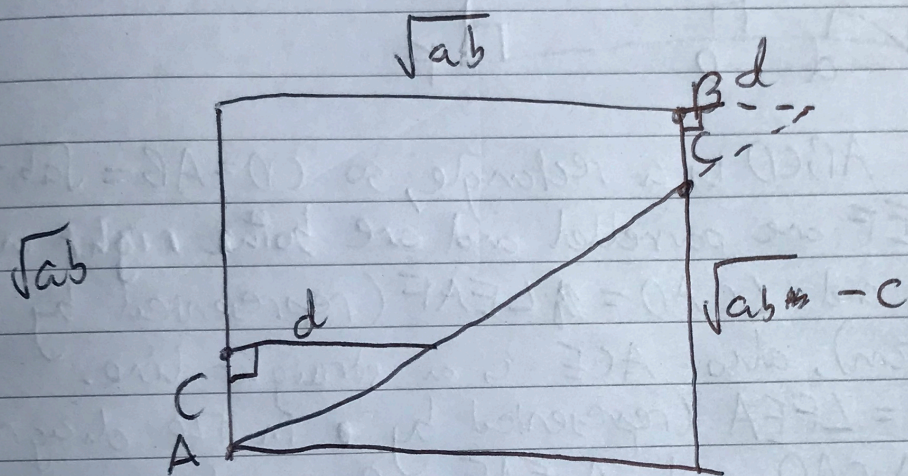
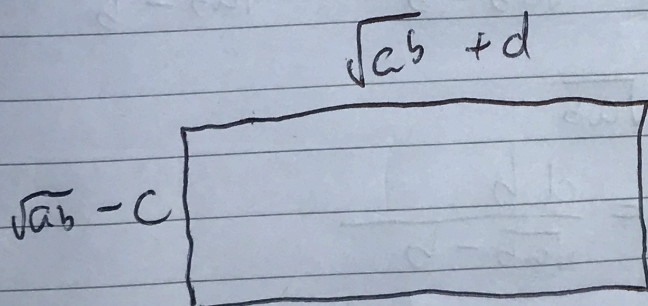


Take a rectangle length 'a' and width 'b'
 Any square which can be rearranged to form this rectangle must have dimensions of \sqrt{ab} , as the area of the rectangle ($a \times b = ab$), must equal the area of the square ($\sqrt{ab} \times \sqrt{ab} = ab$) as no pieces are being removed.

Using Minih's method we can form a rectangle of the desired dimensions 'a x b':

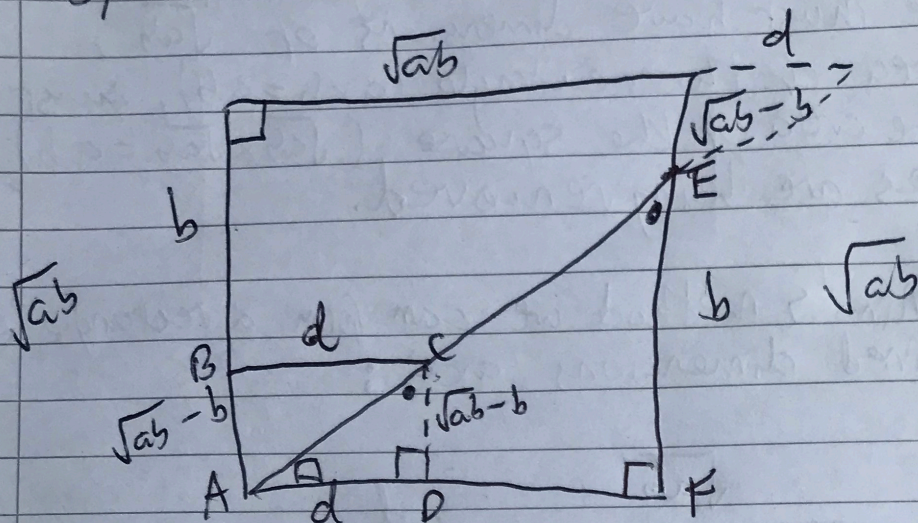


Using Minih's method (as shown above) a new rectangle can be formed; the one below of dimensions $\sqrt{ab} + d$ and $\sqrt{ab} - c$:



When carrying out Minih's method, we can only choose the length of 'c', so for this rectangle to have a width of 'b': $\sqrt{ab} - c = b$
 $\therefore c = \sqrt{ab} - b$

So, let's ~~draw~~ redraw the divided square with this information:



~~rectangle~~ ABCD is a rectangle, so $CD = AB = \sqrt{ab} - b$.
 CD and EF are parallel and are both right angled triangles and $\angle CAO = \angle EAF$ (represented by \square in the diagram). also ACE is a straight line.
 so $\angle DCA = \angle FEA$ (represented by \bullet in the diagram)
 Hence $\triangle CAD$ and $\triangle EAF$ are similar, with $\triangle EAF$ an enlargement of $\triangle CAB$ by a scale factor of $\frac{b}{\sqrt{ab} - b}$

$$\text{Hence } AF = d \times \frac{b}{\sqrt{ab} - b} = \frac{db}{\sqrt{ab} - b}$$

$$\text{also } AF = \sqrt{ab}$$

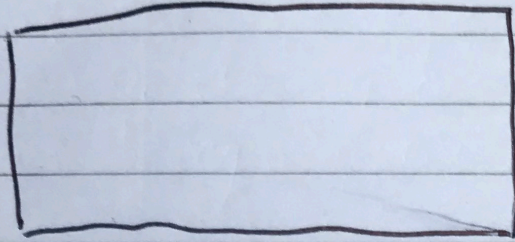
$$\text{so, } \sqrt{ab} = \frac{db}{\sqrt{ab} - b}$$

$$\begin{aligned} \sqrt{ab}(\sqrt{ab} - b) &= db \\ ab - b\sqrt{ab} &= db \\ d &= a - \sqrt{ab} \end{aligned}$$

So finally, our final rectangle has dimensions:

$$\sqrt{ab} + (a - \sqrt{ab}) = a$$

$$\sqrt{ab} - (\sqrt{ab} - b) = b$$



So using Mohr's method and ~~choosing~~ the any rectangle can be reproduced as a square ~~by~~ as 'a' and 'b' could be any positive number.

