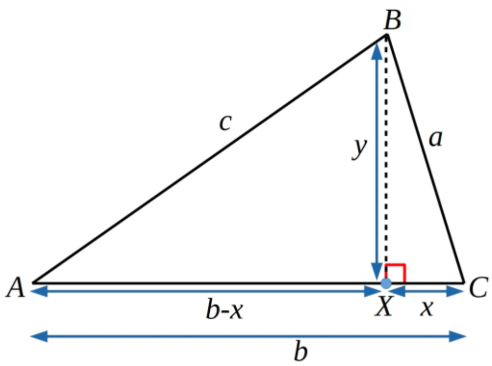
The Converse of Pythagoras

The **converse** of Pythagoras' theorem states that:
"**If** a triangle has lengths a, b and c which satisfy $a^2 + b^2 = c^2$ **then** it is a right-angled triangle."

Here is a diagram, and a proof that if $a^2 + b^2 = c^2$ then C cannot be less than 90°, but the proof has been scrambled up.
Can you rearrange it into its original order?



Expanding gives $x^2 + y^2 + b^2 = b^2 - 2bx + x^2 + y^2$	A
Let $CX = x$ and so we have $AX = b - x$, and also let $BX = y$	B
If $x = 0$ then point X is at the same place as point C, which means that $\angle ACB = 90^\circ$	C
This means that either $b = 0$, which is not possible as b is the length of a side of the triangle, or $x = 0$	D
$\triangle\, CXB$ is right-angled, so we have $x^2 + y^2 = a^2$	E
If $C < 90^\circ$ then there will be a point X on side AC such that $\angle AXB = 90^\circ$	F
This contradicts our initial statement that angle C is less than 90°, and so C cannot be less than 90°	G
We start by assuming that there exists a triangle ABC with lengths a, b and c where $a^2 + b^2 = c^2$, and angle C is less than 90°	H
We have $a^2 + b^2 = c^2$ and substituting for a^2 and c^2 gives $(x^2 + y^2) + b^2 = (b - x)^2 + y^2$	I
$\triangle\, AXB$ is right-angled, so we have $(b - x)^2 + y^2 = c^2$	J
Simplifying gives $2bx = 0$	K