

1. The first thing Mr. Lopez did was draw a right triangle, triangle RST , with legs the same length as those of triangle ABC (see above). Why can Mr. Lopez say that $r^2 + s^2 = t^2$?

because $a^2 + b^2 = c^2$, also $r = a$, $s = b$, and $t = c$

2. Since $r^2 + s^2 = t^2$, he next claimed that $a^2 + b^2 = t^2$? Why can a and b be substituted for r and s ?

because $r = a$ and $s = b$

3. He next stated that $t^2 = c^2$. Explain why this must be true.

because $a^2 + b^2 = t^2$ and $a^2 + b^2 = c^2$ so $c^2 = t^2$ by (PC+C)

4. He finally stated that $t = c$ and explained that if the three sides of one triangle are congruent to the three sides of another triangle, then the triangles must be congruent. What can now be said of the measure of angle C ? What does this mean about triangle ABC ?

$C = 90^\circ$ so $\triangle ABC$ is a right triangle