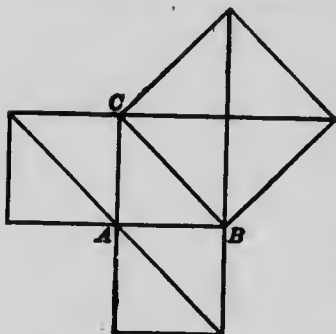
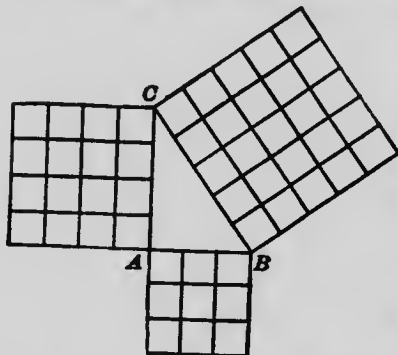


1. In the right-angled triangle ABC , the length of the base AB is equal to the length of the perpendicular AC . Draw the triangle ABC and erect a square upon each of the three sides. Show by measurements and by other proof, if you can, that a square erected upon the hypotenuse is equal to the sum of the squares erected upon the other two sides?



(How do the triangles in this figure compare in size?)

2. In the right-angled triangle ABC , the base is represented as 3 feet long and the perpendicular as 4 feet long. Can you show that the square of the hypotenuse is equal to the sum of the squares of the other two sides? Can you show this in every right-angled triangle whose base and perpendicular are in the ratio of 3 to 4?



3. Can you show that in every right-angled triangle the square of the hypotenuse is equal to the sum of the squares of the other two sides?
4. Give the formula for finding the hypotenuse when the base and perpendicular are given; for finding the perpendicular when the base and hypotenuse are given; for finding the base when the perpendicular and hypotenuse are given.
5. What is the length of the hypotenuse of a right-angled triangle whose base is 4 in. and whose perpendicular is 3 in.? whose base is 9 in. and whose perpendicular is 12 in.?
6. What is the base of a right-angled triangle whose perpendicular is 6 in. and whose hypotenuse is 10 in.? whose hypotenuse is 18 ft. and whose perpendicular is 12 ft.?
7. Find the perpendicular of a right-angled triangle whose base is 15 yd. and whose hypotenuse is 30 yd.