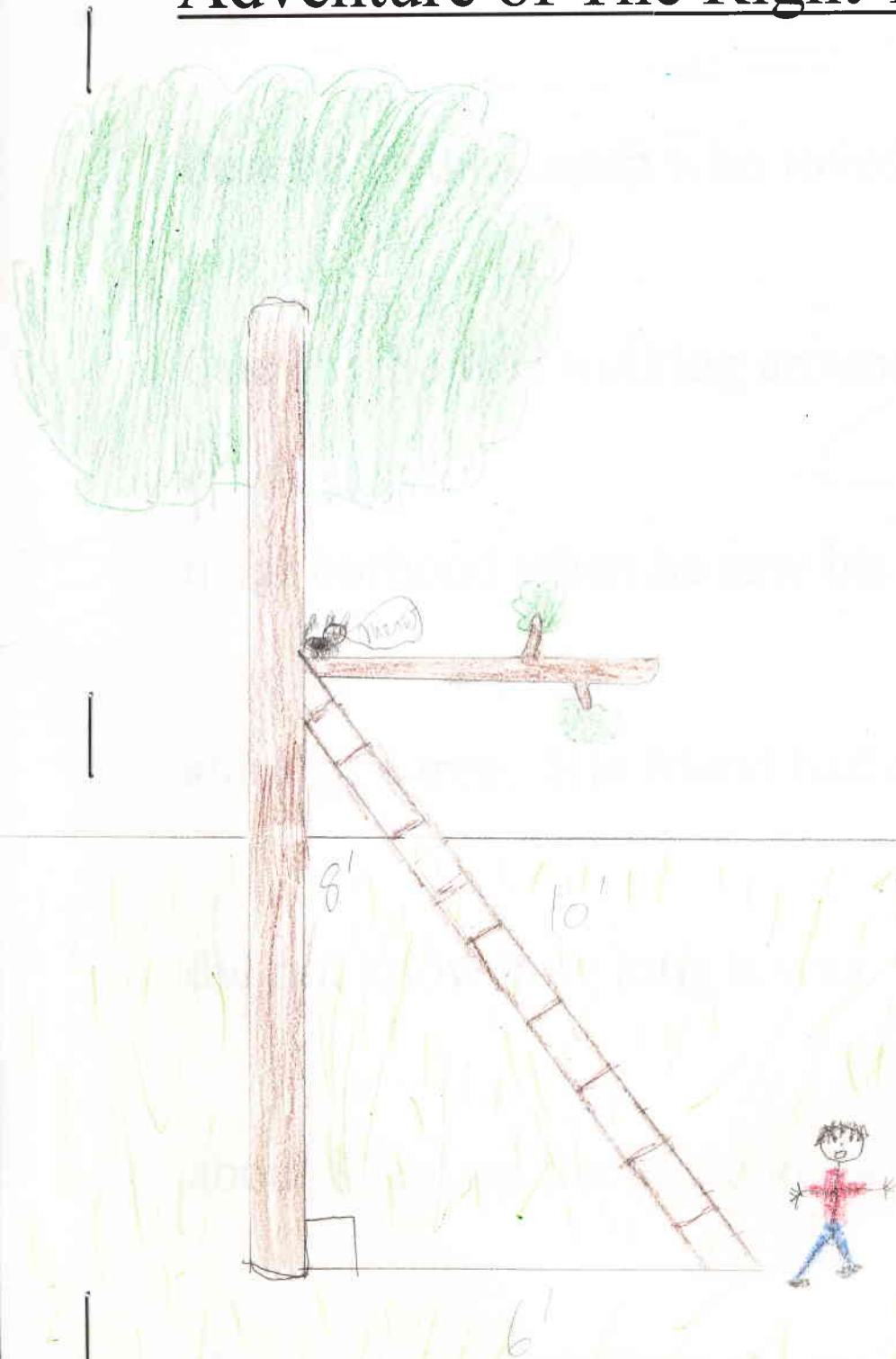


# Poncho Pythagorean and The Adventure of The Right Triangles



By  
Dakota  
Cisco

Once upon a time there was a boy named  
Poncho Pythagorean who loved to help people.

One day he was walking around his  
neighborhood when he saw his friend's cat  
stuck in a tree. His friend had one ladder and  
did not know how long it was. The cat was  
about 8 feet up the tree and the ladder was  
about 6 feet away from the tree.

Poncho found out about how long the ladder was by using what he knew about triangles.

He knew that with right triangles he could use the Pythagorean Theorem to find the length of the ladder. He knew that the tree met the ground at a right angle and the ladder helped form a right triangle.

The Pythagorean Theorem says  $A^2 + B^2 = C^2$ .

In this case ten squared added with eight

squared is the length of the ladder squared.

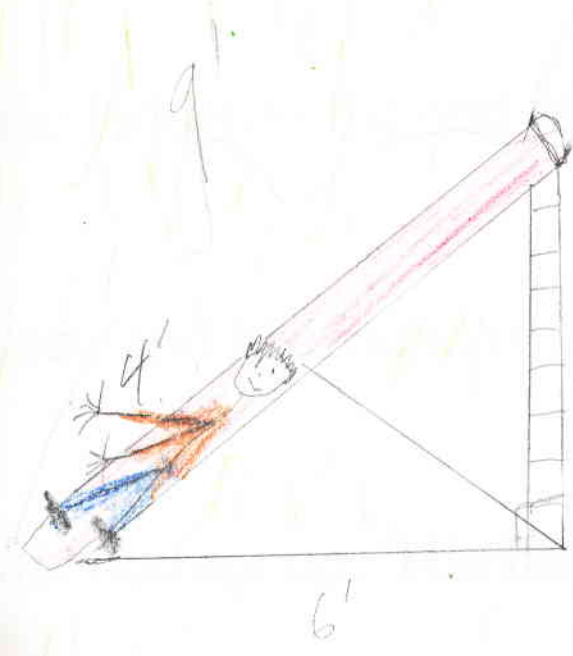
Poncho found that  $8^2$  was 64 and  $6^2$  was 36,

and when you added them together they

equaled 100. So he took the square root of

100 and got 10. The ladder was around 10 feet

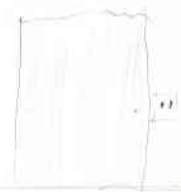
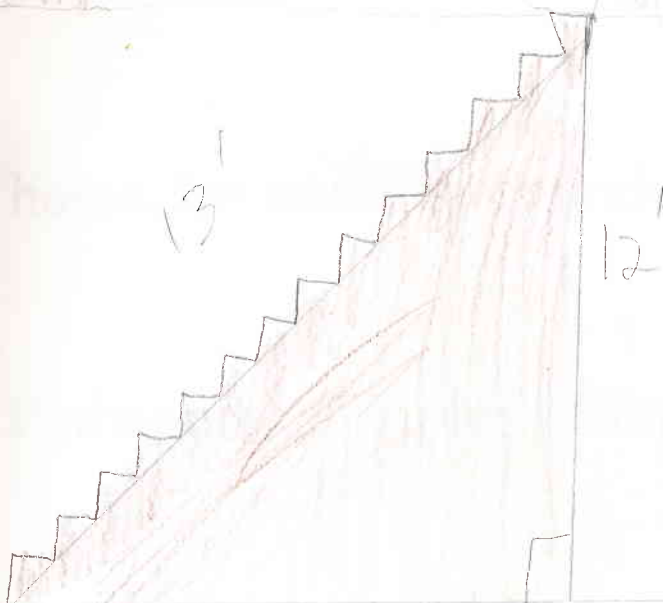
in length, how cool is that?



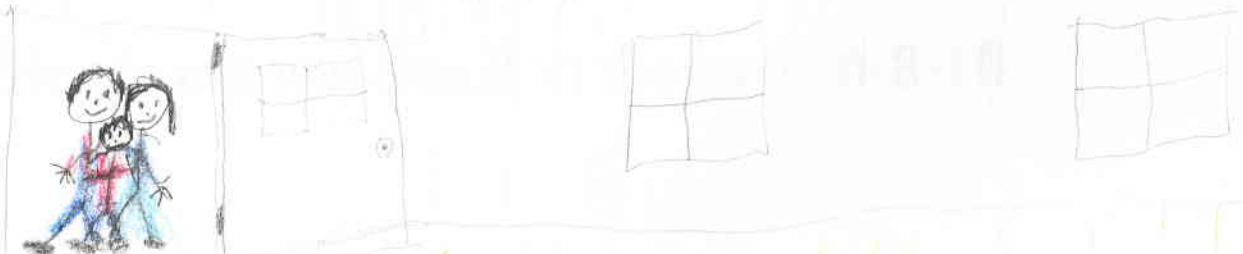
11. On the way home, Poncho saw one of his friends on a slide and his friend wanted to know how long the slide was. The bottom of the ladder to the end of the slide was about 6 feet, and his friend is laying on the slide from the bottom up. His friend is four feet tall.

Poncho saw that a bar was perpendicular to the spot on the slide where his friends head was.

He knew that there were special properties for a right triangle that had an altitude to the hypotenuse. Poncho used geometry to find the length of the ladder. He knew that part of the hypotenuse multiplied by the whole hypotenuse would equal the measure of the known leg squared. He took  $6^2$  or 36 and divided it by 4 and got 9.



5'



So the length of the ladder was 9 feet, another wonderful way to use math. When he got home, his parents reminded him of the Pythagorean Triples. He then realized that he could have used this information today, when his friends cat was stuck in the tree. 6-8-10 triangle was part of the 3-4-5 triple. His parents gave him an example problem about

triples using the stairs. They told him that the height was 12 and the floor length was 5.

Poncho thought for a moment and knew that if he could not remember the triple, he could always use the Pythagorean theorem. He found the answer to be 13 which was in fact a triple. That's how Poncho learned that right triangles are important to learn about.