

# The Story of SOHCAHTOA

## Trigonometry Functions

Once upon a time, a long time ago, there lived a poor girl on a farm. Her name was Wilma, she lived all alone. She lived a humble life that didn't involve too much change. She started each day tending her onion and carrot garden and ended each day with her favorite passion. She loved dancing. Every night, as the sun began to set, she would retire into her cottage, turn on her CD, and dance the night away.

Meanwhile, up at the castle, Prince Fred was wondering what the rest of the world was like. He hopped on his handsome steed and set out to find out what others in the Kingdom did with their days. He made his rounds and bumped into a million different people, but nothing made much of an impression with him until he heard a sound. He rode over to Wilma's cottage and listened to the unfamiliar rhythm he heard. He knocked on the door and asked her what she was doing. She explained that she was dancing to music. He asked her if she would be willing to teach him how to dance and she accepted immediately.

Fred was a very slow learner when it came to dancing. It appeared, that no matter how hard Wilma tried to get him into the right step, he would somehow lose the beat and wind up stepping on her toe. He left at midnight, but asked if she would mind if he came back for another lesson.

Needless to say, the dancing lessons went on, and they fell in love. Fred soon proposed marriage to Wilma and she, of course, accepted. King Fred and Queen Wilma continued their dancing hobby every Friday night. The only problem for Queen Wilma was that no matter how hard she tried to teach King Fred, he remained terribly clumsy! And whenever they went dancing, he would always step on Queen Wilma's big toe.

Queen Wilma learned to live with this slight flaw in their true love relationship. But this big-toe stomping was no laughing matter. So each Saturday morning, after one of their big dancing dates, Wilma would wake up early and sneak out of the castle to her favorite pond. There she would sit for an hour, soaking her big toe until the swelling went down.

As the years passed by, the whole kingdom would watch the King and the Queen's rituals of dancing and soaking with delight. Even after the King and the Queen died, their love story lived on in the hearts of the kingdom. Of course, like all good legends, time changed the facts, as well as the names.

King Fred was remembered as:

**King Klutz**

and Queen Wilma was remembered as:

**Queen Sohcahtoa**

(soak a toe a!)

This leads into the discussion for all right triangles:

$$\text{Sine} = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\text{Cosine} = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\text{Tangent} = \frac{\text{opposite}}{\text{adjacent}}$$