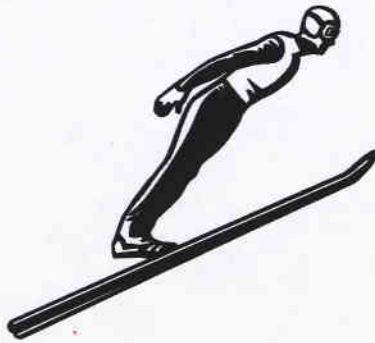


Mount Compete

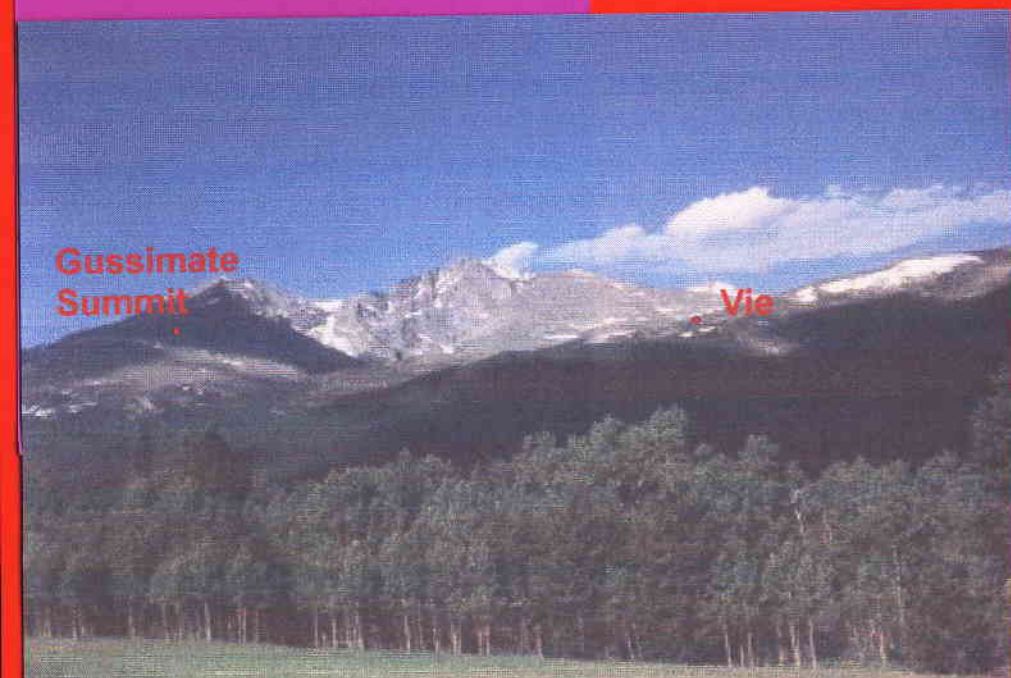


**By: Caroline Dirks
And Natalee Olson**



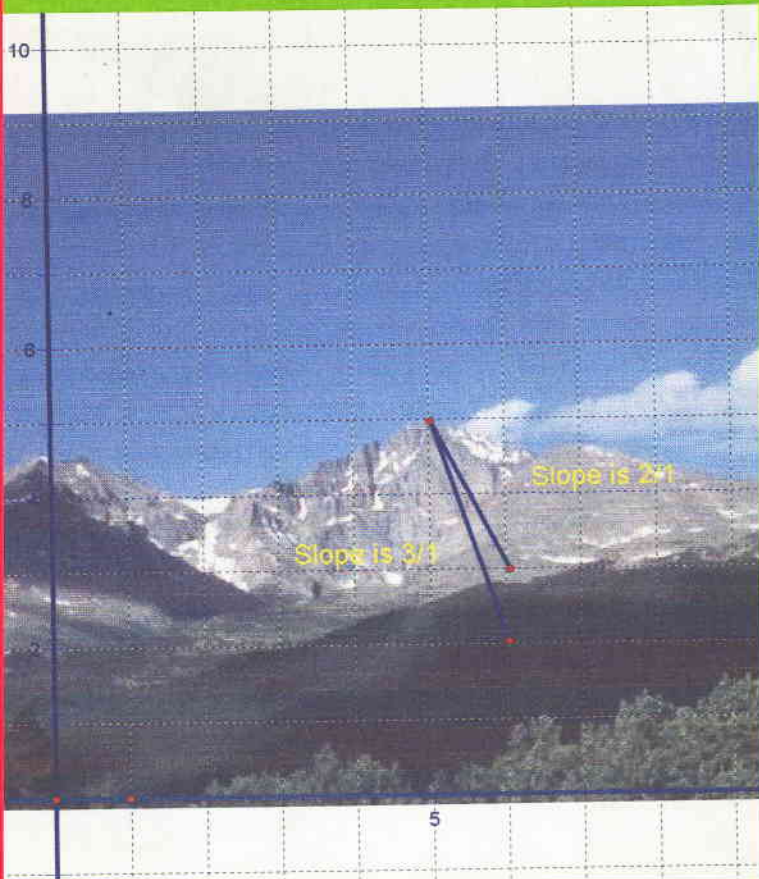
Arithma Tic, the sports coordinator for a small town in the Rockies called Vie, woke up ready to start the big race. Little did she know that there might not be a race because of a sore competitor. You see the town of Vie has always been a town of competition. In the spring there was the downhill raft races to see who could get to the bottom the fastest. Hiking up to the top of Mount Compete was the favorite event in the summer to see who was the fastest and the strongest. Also, they had good old fashioned cooking competitions outdoors in the wilderness to see which competitor could make the yummiest food. But, these competitions were nothing compared to the biggest and the best. The downhill ski race that was held annually against Vie's biggest rival Guessimate Summit which was on the other side of Mount Compete.



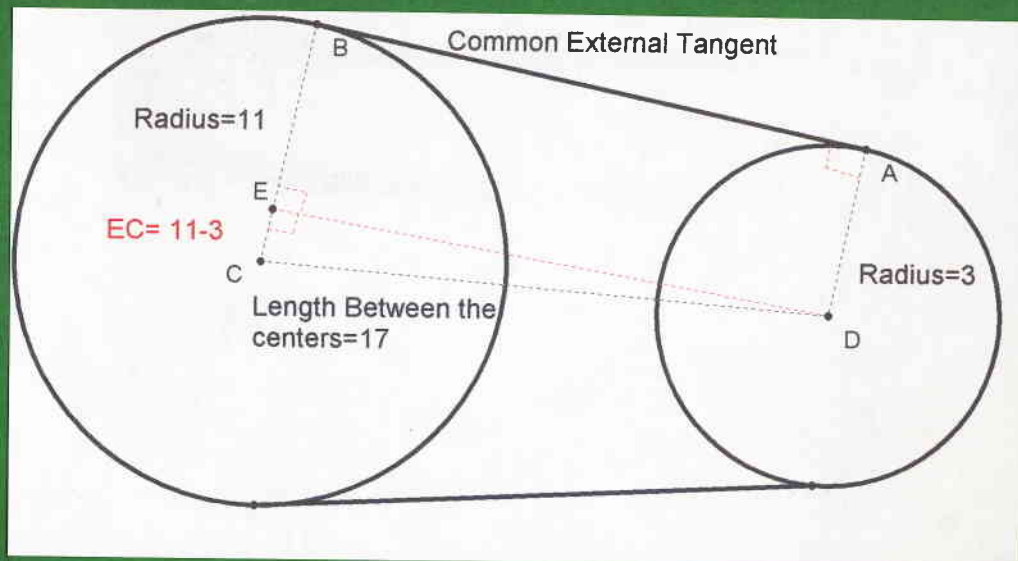


This rivalry between the two towns had been going on for many years. It all began when Aritma Tic's town held a race over by Guessimate Summit. They all expected everything to be fair. This included the **slope** of the mountain to be the same and the length of the race to be accurate. This did not happen. They **estimated** it to be about the same but it really was not which gave Gussetimate Summit an unfair advantage. This memory from about 5 years ago reminded Arithma to go check up on the set up for the big race to make sure everything was fair and therefore equal.

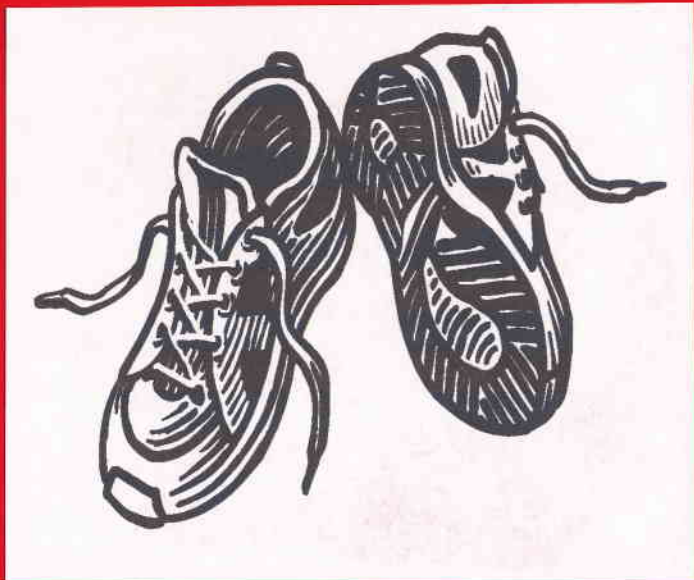




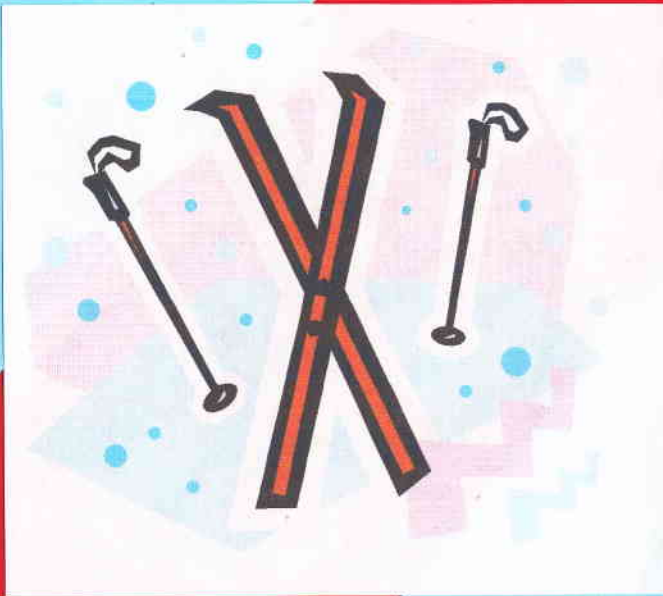
As she was walking up to the side of Mount Compete she noticed that one lane of the snow for the skiers was a little bit steeper. The slopes of the two lanes were not the same. As Miss Tic checked the slope with height of the lanes to the length of the lane they were not the same. One of the lanes had the slope of $2/1$ while the other had the slope of $3/1$. This meant that one lane had a steeper drop, so then one skier would be able to go faster. Arithma then decided to check the length of each lane of the slopes so that she could see if any other changes had to be made. She walked over to the chair lift to get a lift up to the top. The lift wasn't running yet, so she assumed she was the first one to need to go up to the top of the mountain.



As she arrived, the lift manager Circ came running out to her calling, "The pulley is missing, we can't go to the top of the mountain. We have no pulleys." Calmly, Arithma went inside to look at the pulley system. Seeing that there were not any pulleys, she quickly found a tape measure used for measuring the length of the biggest French Fry in the fall cooking competition. Arithma stretched out the tape measure and measured the **radius**, the length from the center of the circle to the rim. Arithma figured that the smaller circle's radius was 3 feet long and the bigger circle's was 11 feet long. She then measured the distance between the centers of the circles, and got 15 feet. Thinking that a **common external tangent**, a line that touches two circles in exactly one spot without separating the circles, would connect the pulleys perfectly, she solved the problem for the common external tangent.



Therefore, after careful calculations with a red pen the common external tangent was 15 feet long. Using the lace from her shoe, she was able to measure the remaining **circumference**, the length around the circle. The pulley that Arithma needed was 126 feet and 4 ½ inches. As Circ ran to the maintenance office to get a new pulley for the chair lift, Arithma went to check up on the skiers. Outside, she saw a big uproar. The competitor from Vie was holding up his skis, which appeared to be glued together so that they were **oblique**, two lines that cross.



He was calling out to anyone who would listen, "My skis, they are not **parallel!** They intersect! They *cannot* intersect! My skis can *never* intersect!" Arithma knew this must be sabotage of their race. Miss Tic pulled out her Mr. Sticky's De-Sticker.



“Here, use this,” she said, handing the athlete the bottle, “un-stick your skis with this, then you can set them parallel.”

After all of the commotion, Arithma saw the chair lift start to work again. She sighed with relief. Now she could go see if the lanes for the race were **congruent**. If the lanes were congruent then the slope and the length of each lane would be equal.





Once at the top, Arithma skied down each slope with a skiometer that measures the distance traveled on skis. This way she would be able to compare the results of each slope. Her conclusion was the same as what she observed at the bottom, that the length of each was the same and the slope was the only difference. To fix the difference of the slope she took $\frac{1}{6}$ of the $\frac{3}{1}$ slope and put that on the $\frac{2}{1}$ slope, thus making both slopes $\frac{5}{2}$. Once all of the work was completed she was ready to just get this competition over with. Really if someone went to all of the trouble to cheat then sports just weren't fun anymore!

3.14



Now that everything was fair, no one had to worry about Vie or Guesstimate Summit cheating. Two skiers, each representing their own town, swished up to the starting line and got ready to begin the race. The race started off extremely close, around every corner there was a new leader, first Guesstimate Summit, then Vie and back and forth. Finally, the race came down to the last hill. It was a good thing Arithma Tic made sure the two course's slopes were congruent, otherwise the wrong person would have won. Both racers hit the final hill at the same time plunging into the air, Guesstimate Summit's skier plunged **vertically** through the air, while Vie's competitor stuck her chest out and hurled forward in a **horizontal** position. The racer from Vie hit the ground first and beat her competition to the finish by 3.14 seconds.



There have been many races since this match up, none have been quite as legendary as this race we just told you about. They even gave a name to the year in which it happened, π . This function is used in math often and happens to be about 3.14 the amount of time the race was won in. If you ever happen to be going through the Rockies and take some time to look, I am sure you will be able to see these two rivals bickering or competing in some type of race. It is a legend in the mountains. The race still continues till this day, and there have been no more attempts at cheating as far as everyone knows. This year will be the 147th year of the match up between the rivals.