**I Can Solve Real-World Problems Using Percent and Buffelgrass**

Background:

Buffelgrass (Pennisetum ciliares) is the archenemy of the Sonoran Desert. This grass was intentionally brought from Africa to the Tucson area in the 1930s and was planted for cattle forage because of its drought tolerance. However, the invasive grass has invaded Saguaro National Parks and other natural areas and is causing significant damage to the native ecosystem, including saguaros. Buffelgrass poses a threat to saguaros and other plants in Saguaro National Park by causing the spread of fires that kill the native plants but cause the buffelgrass to immediately grow back.

Scenario:

Denise and her four friends hear about the buffelgrass pulls that are held at Saguaro National Park every 2nd Saturday of the month. They decide to come out and help pull out buffelgrass. Each brings 3 liters of water to drink while they work. If by the end of the event they have a combined total of are 2.73 liters of water, what percent of the water did they drink? If Denise alone drinks 1 and 1/3 liters of water, what percent of the 3 liters did she drink?

15 liters of water in total

2.73 liters of water left at the end of the day

12.27 liters of water consumed

15/100 = 12.27/x

X= 81.8%

3/100 = 1.33/x

X= 44.33%

Denise drank 44.33% of the 3 liters of water she brought with her.

Denise and her friends’ goal is to pull out 150 buffelgrass plants. By the end of the day, they were able to pull out 2/3 of the amount they wanted to pull. What percent of the buffelgrass was actually pulled? If Denise was able to pull 25 buffelgrass plants on her own, what percent of the buffelgrass did her friends pull?

Percent of buffelgrass pulled = 66.67%

 150/1 x 2/3 = 100

 100/150 = x/100 = 66.67

Percent buffelgrass friends pulled = 83.33%

150 – 25 = 125

125/150 = x/100 = 83.33

Andrew was asked to organize the buffelgrass plants the students had pulled out on to a flat surface so they would dry out and not grow again. To keep things organized, he decided to lay them on the ground in an area that was 10 x 10 feet. As they kept pulling and putting aside buffelgrass, Andrew realized that he would need more area. So, he expanded it to 12 x 12 feet. What is the percent change between the two areas?

Percent change = 24

 10 x 10 = 100

 12 x 12 = 124

 124 – 100 = 24

 24 / 100 = .24

 .24 x 100 = 24%