Objective: Solve real world problems by using rational numbers

Homework: None
Objective: Use rational numbers to solve real world problems

Do Now:

1) Mike hiked to Big Bear Lake in 4.5 hours at an average rate of six and a half miles per hour. Pedro hiked the same distance at a rate of 3.6 miles per hour. How long did it take Pedro to reach the lake?

   **STEP 1**
   Find the distance Mike hiked.
   
   \[ 4.5 \text{ h} \times \frac{6.5 \text{ miles}}{1 \text{ hour}} = 29.25 \text{ miles} \]

   **STEP 2**
   Find Pedro’s time to hike the same distance.
   
   \[ \frac{29.25 \text{ miles}}{3.6 \text{ miles per hour}} = 8.125 \text{ hours} \]

2) Until this year, Greenville had averaged 25.5 inches of rainfall per year for more than a century. This year’s total was ten percent less than the previous average. How much rain fell this year?

   **STEP 1**
   Change the percent into a decimal.
   
   \[ 25.5 \text{ inches} \times 0.10 = 2.55 \text{ inches} \]

   **STEP 2**
   Find this year’s total rainfall.
   
   \[ 25.5 \text{ inches} - 2.55 \text{ inches} = 22.95 \text{ inches} \]
1) Three rock climbers started a climb with each person carrying 7.8 kilograms of climbing equipment. A fourth climber with no equipment joined the group. The group divided the total weight of climbing equipment equally among the four climbers. How much did each climber carry? 

Step 1: Find the total weight

\[ 3 \text{ climbers} \times 7.8 \text{ kilograms} = 23.4 \text{ Total Weight} \]

Step 2: Divide the weight evenly between all the hikers

\[ 23.4 \div 4 = 5.85 \]

2) Foster is centering a photo that is $3\frac{1}{2}$ inches wide on a scrapbook page that is 12 inches wide. How far from each side of the page should he put the picture? 

Step 1: Label the picture

Step 2: How much of the page is not taken up by the picture?

Step 3: Divide the part of the page not taken up by the picture by 2 to find the distance on each side of the picture.
3) The figure shows how the yard lines on a football field are numbered. The goal lines are labeled G. A referee was standing on a certain yard line as the first quarter ended. He walked \( 41\frac{3}{4} \) yards to a yard line with the same number as the one he had just left. How far was the referee from the nearest goal line? _________________________________

Step 1: Find out how many yards of the field the referee did not walk on.

Step 2: Divide that distance by 2 to find the distance to the nearest goal.

4) Diane serves breakfast to two groups of children at a daycare center. One box of Oaties contains 12 cups of cereal. She needs cup for each younger child and cup for each older child. Today's group includes 11 younger children and 10 older children. Is the box of Oaties enough for everyone?

Step 1: Find out how much cereal the younger children need.

Step 2: Find out how much cereal the older children need.

Step 3: Answer the question