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Math Exhibition

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### Math Exhibition

In this unit we studied ratios and proportions. We looked at the ways that you can use ratios and proportions in real life. In our day to day life we use proportions and ratios all the time, we use them in our jobs, schools and daily life. There are many examples of jobs that use this kind of math. We also use the same kind of math in our school in many ways. To start off the unit we were asked to answer 2 questions out of the 12 that were given to us. The questions we chose used ratios and proportions, and showed us the many ways that ratios and proportions could be used. During this unit we were also asked to make up a question we are interested in and use ratios and proportions to solve them. I came up with the question what is the ratio of villains to heroes dying in marvel movies, and what is the ratio of heroes to innocent people dying in marvel movies. I chose this question because I was interested in seeing whether heroes were actually good at their job of protecting earth. Many people in the movies claim that we don't need heroes, and that all they do is kill innocent people, and bring trouble to earth.

In our day to day lives we use ratios and proportions in many ways. Many jobs use ratios and proportions. One example would be if you were an architect and you were designing a building. Before the architect builds the building he must make a model of the building to see how it would look. To do this the architect needs to take the original size of the building and

scale it down to the point where he can fit it in his hand. An example of this would be if you were designing a building that had these measurements 32 by 24 by 16. To scale down the numbers you start by finding a number they could all divide by, in this case its 8. After you find that number you divide 32 by 8, 24 by 8, and 16 by 8. The new equation you get is 4 by 3 by 2, now you have a small model of the building you intend on building. Another example would be if you were a baker and you were making a cake that should feed 100 people. The recipe you are using only makes a cake big enough for 25 people. What you should do is scale up the amount of ingredients that are needed. If the recipe calls 3 cups of flour than you would scale it up by 4, because 25 times 4 is 100. You can use this math in so many ways, many jobs use this kind of math.

We also use ratios and proportions in schools. Many schools use ratios and proportions in many ways. Our school for every 10 students to go out to park there must be 1 teacher, the ratio would be 1:10. We use this ratio everyday when we leave to go to park, or gym. Another way we use ratios in schools is when we are trying to fit everyone's exhibitions into 3 days. If there are 12 people and 1 hour per day dedicated to exhibitions than the ratio is 1:4. This ratio means that for every 1 hour 4 kids will go, and you can also find out how long each kids presentation will be. What you would do to find that out is you would do  $60$  (1 hour) divided by  $4$  (kids) =  $15$  min per presentation. As you can see we use ratios and proportions in our day to daylife, even if we aren't aware that we are doing it.

For my interest driven question I decided to choose a topic I was really interested in. I chose to look at all the deaths in marvel movies. The question I was trying to answer was what is the ratio of villains to heroes dying in marvel movies, and what is the ratio of heroes to innocent

people dying in marvel movies. I chose to look at 8 marvel movies I was interested in. I chose this topic because I was wondering how good the heros were at protecting the innocent, and I wanted to watch all the movies again. However a I was watching the movies I was having a hard time trying to find all the dead people in the background, and whether they were good or bad. I decided to look on youtube and search how many deaths were in this movie, and I found a youtube channel that pointed out the deaths in the movies and counted them all up. I still watched all the movies but this channel made my life so much easier. Many people in the movies make the claim that superheroes aren't good. John Jonah Jameson is a reporter from spiderman comics that makes the claim that spiderman isn't a hero, and that he should be put in jail. John Jonah isn't the only one making these claims, many characters from the comics and movies have made the same claims. The final answer I got was really surprising, these are the amount of deaths: Good guys overall: 179 people / Bad guys overall: 2457 people / Innocent people overall: 3800186. From the movies I chose you can see that many innocent people die while the "good guys" are fighting the "bad guys". In the movies you can see that the middle column (bad guys) always has the highest number of deaths, however in infinity war half the universe dies. I don't know how good the guys are, because they are supposed to be saving mankind however they are clearly failing at their job by letting 3800186 innocent people die. I don't really know how this has anything to do with real life however I really liked this topic.

In conclusion I learned that you can use ratios and proportions in many ways. You can use it in your job, school, and when you're answering how many marvel deaths there are. I had a lot of fun watching movies and also doing math. I think that ratios and proportions are really useful and that it's important to learn how to use them.