Ready, Set, Go!

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Ready

Topic: Ratios, Proportions and making predictions

The table below shows how Marco spends his time on a typical day. Use the table to answer the questions below.

Activity	Hours Spent per Day	Hours Spent per Week	Hours Spent per Month
Exercise	1		
Watch TV	2		
Reading	.75		
Math	1.5		
Household Chores	1.75		
Other Schoolwork	3		
Video games	.5		
Talk with Friends	2		
Eating	1.5		
Sleeping	10		

1. What fraction of a day does Marco spend sleeping?

2. What percent of the day does Marco spend doing "Other Schoolwork"?

3. What amount of time would you predict Marco would spend on video games for an entire week?

4. Add a column to the table and fill it in with predictions for Marco's activities for an entire week. What other activities might Marco engage in that are not on the table? Why is it possible that not every activity is listed?

5. Add another column to the table and fill it in with predictions for Marco's activities for an entire month. How do you use the given data to make predictions for an entire week or month? Explain your reasoning.

Set

Topic: Organizing information in matrices

Elvira has been running a private catering business to make extra money. She needs some help organizing the information in problems 6 through 8 below so that she can better predict amounts to purchase and improve her profits. Assist her by organizing the information in a meaningful way so that she can average the years and do better for the coming year.

6. The last three years Elvira has catered family gatherings and city events. Last year she provided the following at family gatherings she catered: 5 bags of chips, 6 dozen cookies and 4 gallons of drink. Last year at city events she provided the following: 16 bags of chips, 20 gallons or drink and 24 dozen cookies. Organize this information.

7. Two year ago Elvira provided the following at family events: 5 gallons of drink, 4 bags of chips and 5 dozen cookies. While she provided the following at city events: 20 dozen cookies, 18 gallons or drink and 12 bags of chips.

8. Three years ago Elvira provided the following at city events: 14 bags of chips, 20 gallons of drink and 19 dozen cookies. She also provided the following at family gatherings: 6 bags of chips, 7 dozen cookies and 9 gallons or drink.

9. If you provide Elvira with an average amount to be ordered for the gatherings and events she caters in the coming year, how much of each item would she need? Present the average in an organized way.

Go

Topic: Creating expressions and equations

10. If cookies cost $2.50 a dozen, drink is $1.75 a gallon and chips are $2 a bag what would be the total cost for a city event according to your recommendation above (problem 9)? Show your calculations here.

11. Write an expression based on the information above that will calculate the total cost for any amounts of cookies *c*, drink *d* and chips *h*.

12. Write an expression that will calculate the cost for any amounts of cookies *c*, drink *d* and chips *h*, if prices rise to the following: $2.75 for a dozen cookies, $2.25 for a bag of chips and $2 for a gallon of drink. Using this new expression calculate the costs for Elvira in the coming year.

Need help? Check out these related videos.

http://www.khanacademy.org/math/algebra/algebra-matrices/v/introduction-to-matrices