

1. Mr. Gotay has 16 homework papers and 14 exit tickets to return. Mr. Grant has 64 homework papers and 60 exit tickets to return. For each teacher, write a ratio to represent the number of homework papers to number of exit tickets they have to return. Are the ratios equivalent? Explain.

Mr. Gotay

Mr. Grant

2. Jonathan's parents told him that for every 5 hours of homework or reading he completes, he will be able to play 3 hours of video games. His friend Lucas's parents told their son that he can play 30 minutes for every hour of homework or reading time he completes. If both boys spend the same amount of time on homework and reading this week, which boy gets more time playing video games and how do you know?
3. Devon is trying to find the unit price on a 6-pack of energy drinks on sale for \$2.99. His sister says that at that price, each energy drink would cost just over \$2.00. Is she correct and how do you know? If she is not, how would Devon's sister find the correct price?

4. A new self-serve frozen yogurt store opened this summer that sells its yogurt at a price based upon the total weight of the yogurt and its toppings in a dish. Each member of Isabelle’s family weighted their dish and this is what they found.

Weight (ounces)	12.5	10	5	8
Cost (\$)	5	4	2	3.20

Cost _____ Weight.

- a) Does everyone pay the same cost per ounce? How do you know?
- b) Isabelle’s brother takes an extra-long time to create his dish. When he puts it on the scale, it weighs 15 ounces. If everyone pays the same rate in this store, how much will his dish cost? How did you calculate this cost?

5. Alex spent the summer helping out at his family’s business. He was hoping to earn enough money to buy a new \$220 gaming system by the end of the summer. Halfway through the summer, after working for 4 weeks, he had earned \$112. Alex wonders, “If I continue to work and earn money at this rate, will I have enough money to buy the gaming system by the end of the summer?” To check his assumption, he decided to make a table. He entered his total money earned at the end of week 1 and his total money earned at the end of Week 4.

Week	0	1	2	3	4	5	6	7	8
Total Earnings		\$28			\$112				

- a. Answer Alex’s question
- b. Are Alex’s total earning proportional to the number of weeks he worked? How do you know?

6. Mr. Gotay decided to make juice to serve along with the pizza at the Student Government party. The directions said to mix 2 scoops of powdered drink mix with a half a gallon of water to make each pitcher of juice. One of Mr. Gotay's students said she will mix 8 scoops with 2 gallons of water to get 4 pitchers. How can you use the concept of proportion to decide whether the student is correct?

Goal: You will examine situations to decide whether two quantities are proportional to each other by checking for a constant multiple between measures of x and measures of y when given in a table. You have studied examples of relationships that are not proportional in addition to those that are.

1. You have been hired by your neighbors to babysit their children on Friday night. You are paid \$8 per hour. Complete the table relating your pay to the number of hours you worked.

Hours Worked	Pay
1	
2	16
3	24
4	32
4 $\frac{1}{2}$	
5	
6	48
6.5	

- c. Based on the table above, is pay proportional to hours worked? How do you know?
- b. Explain how you completed the table.
- c. How do you determine the pay for 4 $\frac{1}{2}$ and 6 $\frac{1}{2}$ hours?