Solve the problems.

1 Mr. Krogman usually prices the umbrellas in his store at $8 each. However, on rainy days he increases the price by 75%. How much does he charge for an umbrella on a rainy day?

A $2

B $6

C $9.38

D $14

2 Last year 80 students signed up for a summer trip to Washington, D.C. This summer 50 students have signed up to go. What is the percent decrease in the number of students?

A 30%

B 37.5%

C 60%

D 62.5%

3 Jerold's weekly pay rate is $865. He receives a 25% pay raise. How can Jerold calculate his new weekly pay rate? Select all that apply.

A divide $865 by 0.25

B divide $865 by 1.25

C multiply $865 by 0.25

D multiply $865 by 1.25

E Solve for x: $\frac{x}{865} = \frac{125}{100}$

F Solve for x: $\frac{865}{x} = \frac{25}{100}$

4 A student conducted an experiment on plant growth. Plant A was fed a different fertilizer than Plant B. Before the experiment began, Plant A measured 14 centimeters tall, and Plant B measured 16 centimeters tall. At the end of the experiment, Plant A measured 18.2 centimeters tall, and Plant B measured 20 centimeters tall. Which plant, A or B, grew at a greater rate?

Plant _____ grew at a greater rate.

5 Diana guesses that there are 120 gum balls in a jar. There are actually 96. In another game she guesses that there are 75 jelly beans in a jar. There were actually 60. In which game did Diana have the smallest percent error?

Show your work.

Answer _____

6 In the spring, the owner of a sporting goods store decreases the price of winter gloves from $10.00 to $8.00. She increases the price of swimming goggles from $8.00 to $10.00. Without doing the math, do you think that the percent decrease in the price of gloves is the same as the percent increase of the goggles? Explain why or why not.

Answer _____

_____

Now use math to show whether or not the percent decrease and percent increase are the same. Explain why or why not.

Show your work.

Answer _____

_____

Self Check ***Go back and see what you can check off on the Self Check on page 77.***

Solve the problems.

1 Paul is making banana bread. The number of cups of bananas he uses is proportional to the number of loaves of bread. Paul uses $11\frac{1}{4}$ cups of bananas to make 5 loaves of bread. Which equation represents the relationship between c, the number of cups of bananas, and b, the number of loaves of bread?

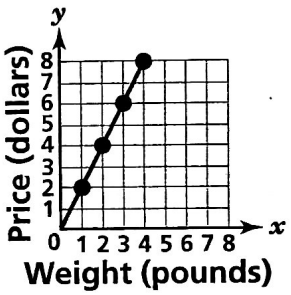
A $c = \frac{4}{9}b$

B $c = 2b$

C $c = 2\frac{1}{4}b$

D $c = 5b$

2 Henry sells apples. The graph shows the relationship between the price of apples and their total weight.



What does the point (0, 0) on the graph mean?

A Henry didn't sell any apples last week.

B Henry does not make any money for selling apples.

C Henry didn't make any money last week selling apples.

D Henry does not make money if he sells no apples.

3 Kelly hiked in the woods. It took her $\frac{1}{14}$ hour to walk $\frac{1}{4}$ mile. After she snacked, she walked another $\frac{1}{6}$ mile in $\frac{1}{16}$ hour. Choose True or False for each statement.

A Before her snack, Kelly walked at a rate of $\frac{4}{14}$ miles per hour. ☐ True ☐ False

B For the second part of her hike, Kelly walked at a rate of $2\frac{2}{3}$ miles per hour. ☐ True ☐ False

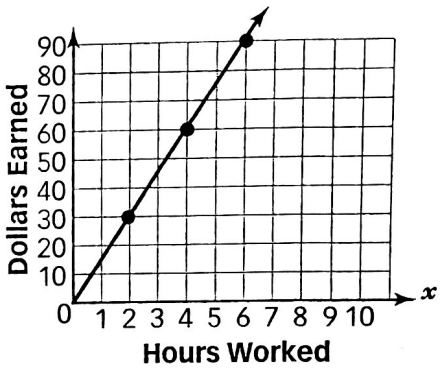
C It took Kelly 2 hours longer to walk $\frac{1}{6}$ mile than it did for her to walk $\frac{1}{4}$ mile. ☐ True ☐ False

D Kelly walked over 30% faster before her snack than she did after her snack. ☐ True ☐ False

4 Traci wants to buy rings that cost $50 each. A jeweler is offering a deal in which you buy 1 ring and get the 2nd for 25% off and the 3rd for 50% off. The sales tax is 8%. Traci will buy 3 rings. How much money will Traci save using the deal instead of paying full price for all 3 rings?

Traci will save $_____

5 The graph shows the relationship between the number of hours Angie works and the amount of money she earns.



Is there a proportional relationship between the number of hours Angie works and the amount of money she earns? Explain. If there is a proportional relationship, what is the constant of proportionality?

6 Coach Shaw is buying baseball equipment for his team. He gets a reduced rate if he buys 8 baseballs for every 3 batting helmets. The reduced rate is $2.25 per baseball and $22.50 per helmet. The sales tax on each item is 6%. Coach Shaw has $400 in his budget to buy baseballs and helmets. What is the ***greatest*** number of baseballs and helmets he can buy at the reduced rate if the ratio of baseballs to helmets is 8:3?

Show your work.

Answer _____