52 An after-school program offers tutoring for different subjects. During the last month, a teacher recorded the number of students who participated in tutoring in each subject, as shown in the table below.

**TUTORING PARTICIPATION**

| Subject | Number of Students |
|---|---|
| Math | 40 |
| Science | 55 |
| English | 47 |
| History | 58 |

Explain how the teacher could use these data to predict **about** how many of the next 100 students will participate in math tutoring.

53 A home-improvement store sold wind chimes for $30 each. A customer signed up for a free membership card and received a 5% discount off the price. Sales tax of 5% was applied after the discount. What was the final price of the wind chime?

***Show your work.***

***Answer*** $_____

54 Ms. Hernandez has $100 to spend on parking and admission to the zoo. The parking will cost $7, and admission tickets will cost $15.50 per person, including tax. Write and solve an equation that can be used to determine the number of people that she can bring to the zoo, including herself.

***Show your work.***

***Answer*** _____ people

***GO ON***

55 Two math classes took the same quiz. The scores of 10 randomly selected students from each class are listed below.

- Sample of Class A: 75, 80, 60, 90, 85, 80, 70, 90, 70, 65
- Sample of Class B: 95, 90, 85, 90, 100, 75, 90, 85, 90, 85

Based on the medians of the scores for each class, what inference would you make about the quiz scores of all the students in Class A compared to all the students in Class B? Explain your reasoning to justify your answer.

**56** A contractor is building the base of a circular fountain. On the blueprint, the base of the fountain has a diameter of 18 centimeters. The blueprint has a scale of three centimeters to four feet. What will be the actual area of the base of the fountain, in square feet, after it is built? Round your answer to the nearest tenth of a square foot.

***Show your work.***

***Answer*** _____ square feet

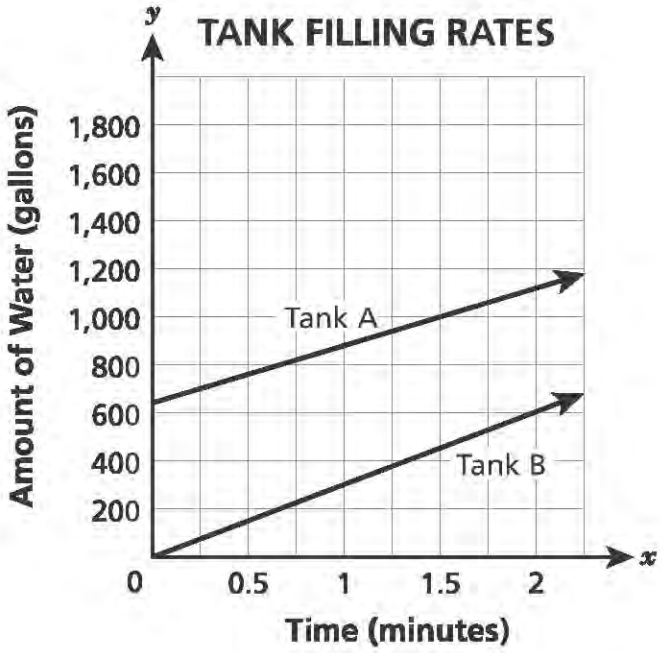
***GO ON***

57 Explain the steps needed to determine the value of the expression shown below. Be sure to provide the correct value of the expression in your explanation.

$$\frac{\frac{1}{2}}{-\frac{2}{5}} + \left(-\frac{1}{4}\right)$$

***Answer***

**58** The lines graphed below show the amounts of water in two tanks as they were being filled over time.




For each tank, explain whether or not there is a proportional relationship between the amount of water, in gallons, and the time, in minutes. If there is a proportional relationship, identify the unit rate. Use specific features of the graph to support your answer.

**GO ON**

59 Trent is fishing from a pier.

- The tip of his fishing rod is $53\frac{3}{4}$ feet above the surface of the water.
- The hook on the end of the fishing line is directly below the tip of the fishing rod $12\frac{2}{3}$ feet below the surface of the water.

Trent estimates that the distance between the tip of his fishing rod and the hook is less than 65 feet. Is Trent's estimate reasonable? Explain your answer.

***Answer***

Trent lets his hook drop another 10 inches. What is the distance, in feet, between the tip of the fishing rod and the hook? Do not round your answer.

***Show your work.***

***Answer*** _____ feet

60 The coach for a basketball team wants to buy new shoes for her 12 players.

Super Sports is offering a 20% discount on each pair of shoes, which were originally priced $72.50. A 6.5% sales tax will be applied to the discounted price.

The same shoes are also available on Double Dribble's web site for $54.75. A 9% processing fee will be applied to the cost of the shoes, plus a shipping fee of $5.99 for each pair.

What is the difference in the total costs of the 12 pairs of shoes between the two stores?

***Show your work.***

***Answer*** $_____

***GO ON***

61 Ruby's Market sells smoked meats by the pound. The prices for several different meats are shown in the table.

**RUBY'S MARKET PRICES**

| Type of Meat | Price per pound |
|---|---|
| Beef | $4.25 |
| Chicken | $2.50 |
| Sausage | $3.25 |
| Turkey | $2.85 |

How much more does $1\frac{1}{4}$ pounds of beef cost than $1\frac{1}{4}$ pounds of turkey?

***Show your work.***

***Answer*** $_____

Brad has $10 to spend at Ruby's. He orders $\frac{1}{2}$ pound of sausage and $1\frac{1}{4}$ pounds of chicken. How much money will Brad have left after he pays for this order?

***Show your work.***

***Answer*** $_____

**STOP**