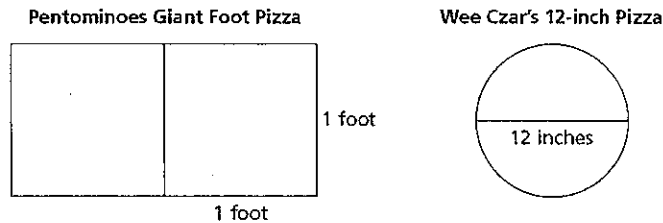


Summer Packet

Short Answer

1. The temperature for the past 8 hours has been changing at the rate of -1.5° each hour. The meteorologist predicts that the temperature will continue changing like this for the next 6 hours. The present reading is 0° ?
 - a. What was the temperature reading 7 hours ago?
 - b. What temperature is predicted for 6 hours from now?
 - c. When was the temperature reading 6° ?
 - d. When is the temperature expected to be -8° ?

2. Pentominoes Pizza introduced a new pizza called the Giant Foot to compete with Wee Czar's 2-pizzas-for-the-price-of-1 offer. The Giant Foot is two 1-square-foot pizzas put together. Pentominoes' ad claims that the Giant Foot is 25% larger than two Wee Czar's 12-inch round pizzas. A Giant Foot costs \$8.99. Two 12-inch round pizzas from Wee Czar's cost \$8.88.

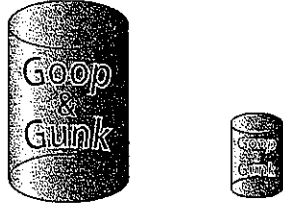


- a. Which offer gives you more pizza for your money?
 - b. Is the Giant Foot 25 % larger than two 12-inch round pizzas from Wee Czar's? If so, prove it. If not, use percents to show how they really compare.
3. Use the medians, means, and ranges given below. Compare the number of movies watched by boys with the number of movies watched by girls during the summer. Explain your reasoning.

Statistic	Number of Movies Watched by Boys During the Summer	Number of Movies Watched by Girls During the Summer
Mean	≈ 5.3	≈ 5.07
Median	4	3
Range	17	14

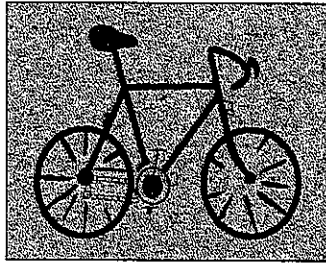
4. Goop and Gunk, Inc. sells oil, grease, and other compounds. Cleaning compound can be purchased in 2 sizes of cylindrical containers, a small size for the home and a large size for businesses.

The home size can has a radius of 2.75 inches and a height of 8.25 inches. The business size can has a radius of 11 inches and a height of 33 inches.



- How many square inches of aluminum are needed to make the home size can? (Assume the cans have flat bottoms and tops.)
 - How many square inches of aluminum are needed to make the business size can?
 - How many cubic inches of cleaning compound will the home size can hold?
 - How many cubic inches of cleaning compound will the business size can hold?
 - If a home size can sells for 85¢, what should the price of the business size can be if the company wants to base the price on the amount of cleaning compound the can will hold?
 - Goop and Gunk, Inc. is also planning to package their home size cleaning compound in a triangular prism. They want the triangular prism to hold the same amount of cleaning compound as the regular can. Give the dimensions of a triangular prism that will hold the same amount.
5. Big A's Bike Rentals charges \$300 plus \$20 per bike to rent bikes for a week. Little Cheeper's rental shop charges \$50 plus \$35 per bike for a week. You need to determine which company to use for your bike-touring project. Write an explanation to a student who has never used a graphing calculator to help that student display and solve this problem on a graphing calculator.

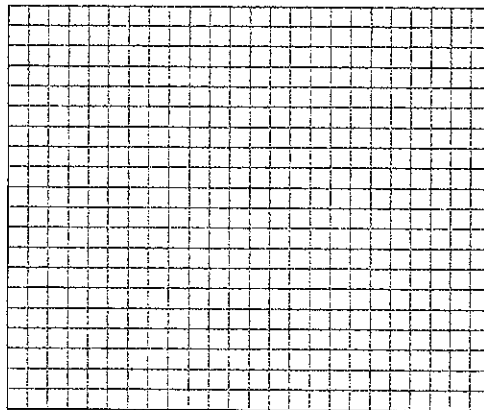
6. The coach took a digital photo of the new cycling team bike. She sent an 8 cm by 10 cm photo to each team member.



- If the photo were enlarged by a scale factor of 150% of its original size, what would be the new length and width?
 - Imagine you want to make a 2 cm by 2.5 cm copy of the original photo. What percent should you use?
 - What scale factor relates the side lengths in the original photo to those in the smaller photo?
 - How will the angles in the original photo compare to the corresponding angles in the smaller photo?
 - How will the perimeter of the original photo compare to that of the smaller photo?
 - Find the areas of the original and the smaller photos. How do these areas compare?
7. Read the following story carefully. Then, make a table and a graph for the story. Be sure to label your axes and the table rows and name your graph and table.

Angie and her friend Jane are going to see a movie at the Civic Theater. The theater is eight blocks from Angie's house, and Jane's house is halfway between the theater and Angie's house. Angie tells Jane that she will walk over to her house and then they will walk the rest of the way together.

- Angie leaves at 4:25 P.M. for a 5:00 P.M. show.
- It takes her 10 minutes to walk to Jane's house.
- She waits five minutes for Jane, and then they walk for two blocks.
- Jane's dog Gizmo appears, so they go back to Jane's house and put Gizmo inside.
- They are afraid of being late, so they run to get to the theater on time.
- They arrive at 4:56 P.M., get their popcorn, and watch the show.



Name: _____

ID: A

8. A bag contains two red marbles and two white marbles.
- a. After a marble is drawn, it is replaced before the next draw. What is the probability that a red marble will be drawn twice in a row? Explain.
 - b. If a marble is drawn and is not replaced before the second marble is drawn, what is the probability that two red marbles will be drawn? Explain.