



National Technical Institute for the Deaf  
**Math Competition for Deaf and  
Hard-of-Hearing Students**

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## ■ RIT Regional Math Competition ■ Team Problem Solving Challenge

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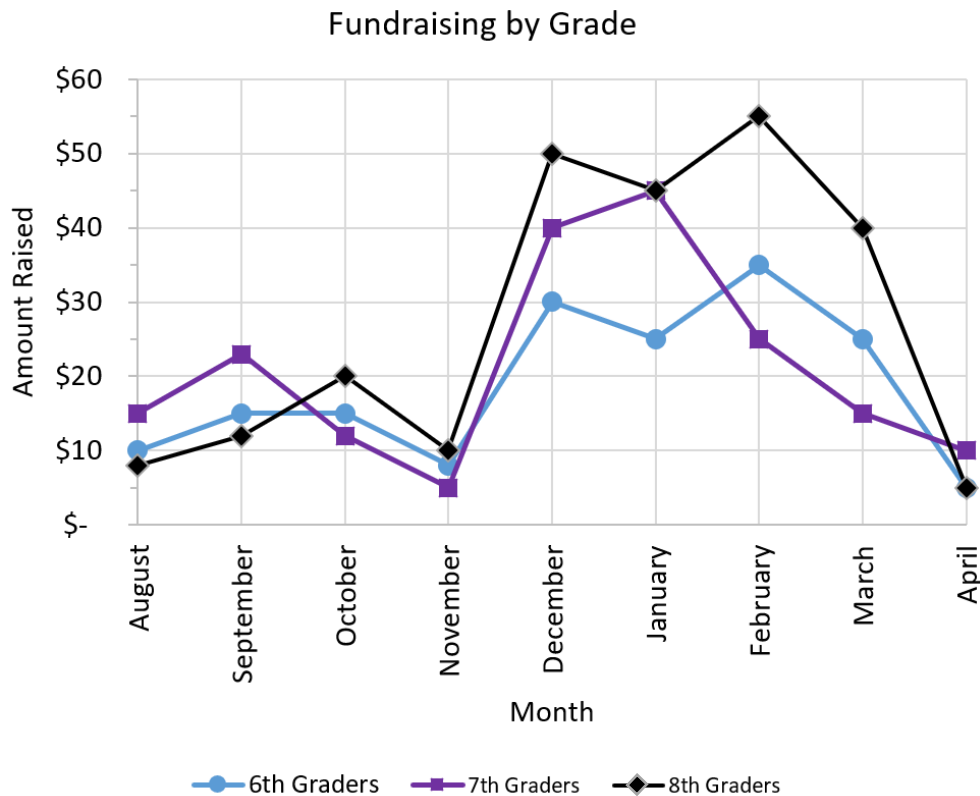
**DO NOT BEGIN UNTIL YOU ARE INSTRUCTED TO DO SO.**

All teams will participate in this Team Problem Solving Challenge. Each team will be given a set of 10 problems to solve within 45 minutes. Team members may work together in any way to solve the problems. Team members may discuss during this section of the competition. The use of calculators is allowed, and calculations may also be done on scratch paper. All answers must be complete and legible. If the answer is expressed in common fraction, reduce the fraction to lowest terms. When all ten problems are complete, the team captain will raise a hand for a runner to get the answer sheet. The runner will bring the answer sheet to one of the judges. The judges will check the answers. If incorrect, the answer sheet will be returned to the team. Each team has at most 3 checks from the judges within the 45-minute limit. At the end of the challenge, all answer sheets will be collected. Each correct answer is worth 2 points, and the team challenge score will go toward to the team overall score, which also includes individual score.

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1. The students at Oak Middle School are raising money to attend a math competition. How much money did the 8<sup>th</sup> graders raise during the months of January, February, March, and April?

1. \$ \_\_\_\_\_

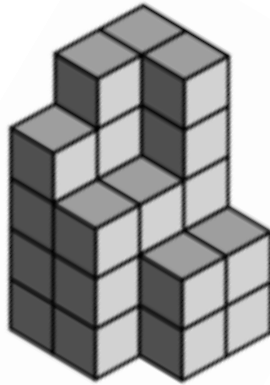


2. Katie drew a scale drawing of the middle school's swimming pool. The pool is 25 yards long in real life and is 10 inches long in the scale drawing. If the pool is 15 yards wide in real life, how wide will the pool be in the scale drawing?

2. \_\_\_\_\_ in

3. How many blocks are in the diagram below?

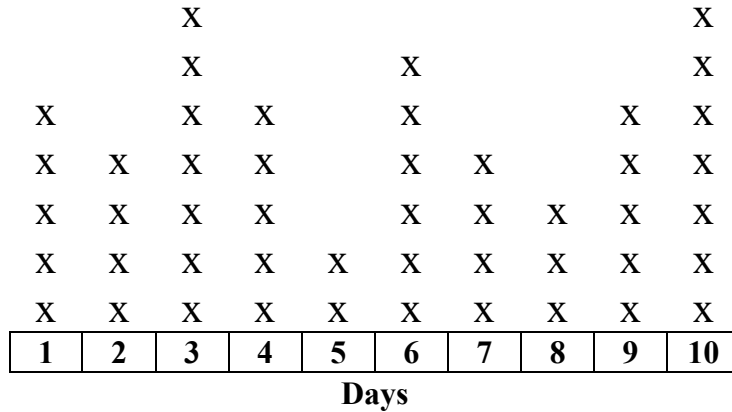
3. \_\_\_\_\_



4. Last year, an automotive company shipped a total of 22,270 electric vehicles to its dealers. This year, the company shipped 28,951 electric vehicles. What is the percent of increase in the number of electric vehicles shipped?

4. \_\_\_\_\_ %

5. Yared sold 48 raffle tickets for his school's fundraiser. He plotted the number of raffle tickets he sold on the graph below. How many different days did Yared sell at most 4 raffle tickets?



X = 1 raffle tickets

6. Karl purchased 7 bags of candy and 4 boxes of candy for a total of 49 pieces. Elena purchased 5 bags of candy and 9 boxes of candy for total of 78 pieces of candy. How many pieces of candy are in each box?

7. Jin cut 2 yards of string into three pieces. The first piece is  $2\frac{2}{3}$  feet and the second piece is  $2\frac{2}{3}$  feet. What is the length of the third piece in feet? Write your answer as a common fraction.

5. \_\_\_\_\_ days

6. \_\_\_\_\_

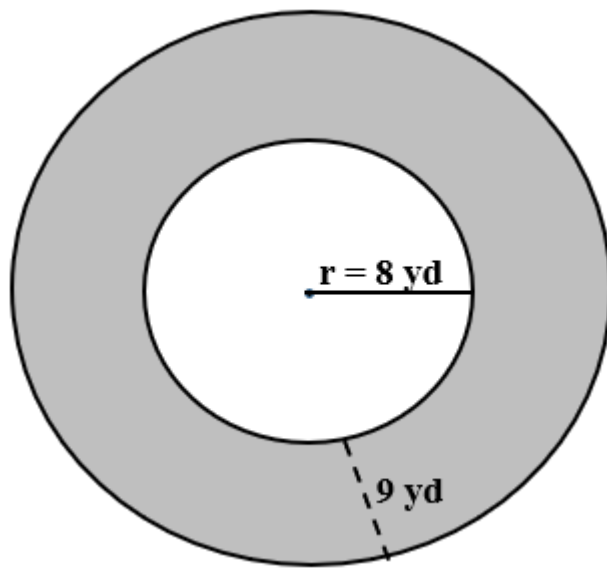
7. \_\_\_\_\_ ft

8. A jar contains 5 red, 6 green, 8 black, 3 white, and 4 blue marbles. What is the probability of choosing a marble that is not blue or white? Write your answer as a common fraction.

8. \_\_\_\_\_

9. Both circles have the same center. What is the area of the shaded region? Write your answer in terms of  $\pi$ .

9. \_\_\_\_\_ sq yd



10. Evaluate:  $\left(\frac{6}{5} \div \frac{3}{2}\right) + \left(-\frac{3}{2} \div \frac{1}{3}\right)$

10. \_\_\_\_\_

Write your answer as a common fraction.