

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

■ RIT Regional Math Competition ■ **Sprint Round** Problems 1 - 30

First Name: Last Name:

DO NOT BEGIN UNTIL YOU ARE INSTRUCTED TO DO SO.

This section of the competition consists of 30 problems. You will have 40 minutes to complete all the problems. You are allowed to use a basic calculator. You are not allowed to use books or other aids during this round. Calculations may 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. Record your final answer in the designated space on the problem sheet. The required unit for the answer is included. If you complete the problems before time is called, use the time remaining to check your answers.

Total Correct	Scorer's Initials

2023 RIT Regional Math Competition

1.	What is the least common multiple of 8 and 12?	1.	
2.	What is the percent increase if Krystal's salary is raised from \$2,400 per month to \$3,000 per month?	2.	%
3.	Divide: $\frac{1}{4} \div 7$. Write your answer as a common fraction.	3.	
4.	Let $a = 7.4$, $b = -1.23$, and $c = 3.2$. Evaluate $a + b + c$ to the nearest tenth.	4.	
5.	A manufacturer needs to ship 1,200 new calculators to the store. If each box can hold 100 calculators, how many boxes will the manufacturer need?	5.	
6.	If a line segment measuring 78 centimeters is bisected to form two new line segments, what is the measure of each new line segment?	6.	cm



10.	Bree jarred 12 liters of peanut butter in 3 days.	10	liters
	How much peanut butter did Bree jar if she spent 4 days making peanut butter?		
11.	Aminata can walk a mile in 14 minutes. At this rate, it takes 56 minutes to walk around RIT campus. How many miles did Aminata walk?	11	mi
12.	What is the area of the parallelogram? $\sqrt{7 \text{ ft}}$ 14 ft	12	_ sq ft
13.	Express 5.09 x 10 ³ in standard form.	13	



Sam counted all the eggs in each chicken coop at the farm 17. 17. where he works. How many coops had at least 41 eggs?

Eggs per Coop				
Stem	Leaf			
2	126			
3	039			
4	035			
5	1779			

18. What is 50% of the sum of the first 10 positive even numbers?

18.

19. The following line graphs show the number of hamburgers and cheeseburgers Crossroads sold from Monday to Friday. What is the ratio of cheeseburgers to hamburgers sold on Tuesday? Write your answer as a common fraction.



- 20. Eight less than four times a number equals ten more than two times a number. What is the number?
- 21. McKenna is running for office and wants to know the amount of income tax paid last year by households in her district. This box-and-whisker plot shows the results. What is the median?



20.

21. \$

19.

22.	Evaluate: 4 ⁻²	Write your a	answer as a	commor	n fraction.	22	
23.	Parallelogram three of its ve of point <i>D</i> ?	n <i>ABCD</i> has A prtices. What i	1(0, 4), <i>B</i> (4, is the sum c	, 4), and of <i>x</i> and <i>y</i>	C(6, 2) as coordinates	23	
			1				
24.	How long is t standing at the long?	he shadow of e base of the	f a 24-foot t tree has a s	ree if a 6 hadow th	-foot studen at is four fee	t 24 et	ft

25.	If you roll a 6-sided die 18 times, what is the best prediction possible for the number of times you will roll a five?	25
26.	Solve for x: $\frac{x+7}{4} = 3$	26
27.	The area of a large rectangular TV is 24 square feet. Find the smallest perimeter, in integers, of the TV.	27ft
28.	At Dogtown, 2 of the last 12 customers wanted ketchup on their hot dogs. What is the experimental probability that the next customer will not want ketchup? Write your answer as a common fraction.	28
29.	How many 8-inch by 8-inch squares can be cut from a rectangular piece of cloth measuring 64-inch by 24-inch?	29

30. Students during lunch took a poll about their favorite cookies. What is the measure of the central angle in the "Chocolate Chip" section?



30. _____ degrees