

2023 Castro Valley Junior Math Tournament
Hosted by CV Mu Alpha Theta

Elementary School Division

Mental Math Individual Round

15 minutes 20 questions

Name: _____

Team Name: _____ Grade: _____

Instructions

- Do not turn over this test until you are instructed to begin.
- Use a non-erasable pen. Do not use a pencil or an erasable pen.
- Do not do scratchwork anywhere.
- Only answers written in the designated box will be scored.
- Do not change any answers after you have written them down.
- Express all of your answers in simplified form.
- Do not include units.

#	Problems	Answers
1	What is $1.23 + 45.678$?	
2	How many seconds does it take to cross a 100 meter bridge if you walk at 50 meters per second?	
3	What is x if $2^x = 64$?	
4	What is 5% of 200?	
5	If one egg has enough yolk for two cakes, then how many eggs must be cracked for 5 cakes?	
6	How much money is 7 hundred-dollar bills, 6 ten-dollar bills, 5 one-dollar bills, 4 quarters, 3 dimes, 2 nickels, and 1 penny?	
7	What is $23 + 34 + 42$?	
8	What is $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10$?	
9	What is $a + b$ if $a = b$ and $b = -4$?	
10	If $\frac{1000}{100+x} = 1$, what is the value of x ?	
11	Simplify $(-2x) \times 7 - 10x$.	
12	What is the smallest palindrome greater than 1392? A palindrome is a number that reads the same forwards or backwards, such as 3443.	
13	How many numbers in the set below are odd numbers? {11, 12, 108, 115, 117, 289}	
14	How many numbers in the set below are divisible by 5? {32, 10, 15, 18, 52, 30}	
15	How many numbers in the set below are divisible by 3? {11, 33, 128, 1566, 378, 9}	
16	Which two numbers have a sum of 14 and a product of 45?	
17	If $x^x = 4$, what is the value of x ?	
18	Mark sets off at 7:40 AM, and his journey takes 45 min. At what time does he arrive?	
19	Kyle reads 24 pages a day. <i>The Great Gatsby</i> has 264 pages. How many days does it take for him to finish it?	
20	What is the largest area that can be enclosed within 24 feet of fencing?	