

# Middle 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 the sum of the first ten natural numbers starting at 1?	
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 divisible by 5? {32, 10, 15, 18, 52, 30}	
14	How many numbers in the set below are divisible by 3? {11, 33, 128, 1566, 378, 9}	
15	Which two numbers have a sum of 14 and a product of 45?	
16	If $x^x = 4$ , what is the value of $x$ ?	
17	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?	
18	What is the largest area that can be enclosed within 24 feet of fencing?	
19	Evaluate $55^2 - 54^2$ .	
20	What is $\sqrt{2\frac{1}{4}} + \sqrt{1\frac{7}{9}}$ ? Express your answer as a mixed number.	