

2020 Castro Valley Junior Math Tournament
Mental Math Test Grades 6-8

Student Name: _____ Grade: ____ Team Number: ____

#	Problems	Your Answers
1	What number is 64 more than half of 42?	
2	How many faces does a cube have?	
3	Round 5071.4285 to the nearest whole number.	
4	When my favorite number is increased by 71 and this result is multiplied by 3, the final result is 465. What is my favorite number?	
5	Your closet contains 5 pairs of pants and 4 shirts. How many different outfits (pairings of shirts & pants) could you wear?	
6	Evaluate: $9 + 8 \times 8$	
7	What is the perimeter, in feet, of a regular octagon with sides measuring 4 ft?	
8	Evaluate: $\frac{1}{3} + \frac{2}{7}$	
9	What is the measure, in degrees, of an angle that is supplementary to a 75 degree angle?	
10	If 3 Zithers are equivalent to 4 Yoyos, how many Zithers are equivalent to 24 Yoyos?	
11	What is the median of the data set {5, 1, 9, 8, 5}?	
12	Express 2704 in scientific notation.	
13	What is the slope of a line perpendicular to the line $4x + 3y = -4$?	
14	A triangle has sides measuring 24 m, 44 m, and x m. What is the smallest possible integer value of x?	
15	What is the diameter, in meters, of a circle with a circumference of 16π m?	
16	What is the 7th term of the arithmetic (adding or subtracting) sequence whose first three terms are 7, 16, and 25?	
17	Express $\sqrt{108}$ in simplest radical form.	
18	What is the area, in meters, of a circle with a circumference of 8π m?	
19	Alejandro and Noah see one another when they are 171 feet apart, and immediately begin running towards one another. If Alejandro can run at a speed of 6 feet per second, and Noah can run at a speed of 3 feet per second, how many seconds will it take them to reach each other?	
20	What is the prime factorization, in exponential form, of 768?	

**DO NOT TURN OVER THIS
TEST UNTIL YOU ARE
INSTRUCTED TO BEGIN**

**ONLY USE A NON-ERASABLE
PEN**

**DO NOT DO SCRATCHWORK
ANYWHERE**

**DO NOT CHANGE ANY
ANSWERS AFTER YOU HAVE
WRITTEN THEM DOWN**