

Name: _____ Team #: _____
School: _____

Mental Math Test

The mental math test contains 20 questions to be done in 10 minutes. All problems must be done mentally. Only answers may be recorded on the test. If work is present, or an answer is changed, even if correct the problem will be marked wrong. Scratch paper will not be provided. All questions will be worth 1 point. Any area of math may be covered on this test. All non-integer answers must be recorded as improper fractions and in terms of π where appropriate, unless the question specifically asks for a different form. Please record your answers in the boxes of the column labeled Answers. Do not write anything in the column labeled Score. Be sure to record name, team #, and school on the test form. When your proctor says to, remove this cover sheet and begin working.

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Mental Math Test	Answers	Score
1. What is the volume of a cube with side length 7 feet?		1 1
2. Evaluate $739 - 427$		1 1
3. Convert the infinitely repeating decimal $0.\overline{30}$ to a reduced fraction.		1 1
4. What is the second largest 2-digit prime number?		1 1
5. How many sides are in a nonagon?		1 1
6. How many inches are in 13 ft?		1 1
7. If Desi has 17 apples, Sydney had 26 mangos, Kirsten has 31 kiwis, and Simran has 11 oranges, how many pieces of fruit does the group have in total?		1 1
8. How many seconds are there in one hour?		1 1
9. Express the sum $4\frac{5}{6} + 5\frac{5}{12}$ as a mixed number.		1 1
10. Which is smaller: $\frac{19}{32}$ or $\frac{11}{19}$?		1 1
11. What is the perimeter of a square with area 9?		1 1
12. What is the area of a triangle with base 13 and height 17?		1 1
13. What is the greatest common divisor of 28 and 42?		1 1
14. If a strawberry costs \$0.18, how much do 9 strawberries cost?		1 1
15. Evaluate the quotient $3\frac{3}{4} \div 1\frac{2}{3}$		1 1
16. Evaluate $45^2 - 14$		1 1
17. Simran is not having much luck lately. His car will only start 80% of the time, independently his motorcycle will only start 60% of the time. What is the probability that Simran's motorcycle won't start but his car does start today (express as a percent)?		1 1
18. If the Mount Rainier Math Team puts out 104 rows with each row containing 96 chairs, how many chairs were put out?		1 1
19. How many positive even integers are greater than 1102, but less than 2011?		1 1
20. Kirsten has 5 shirts, 3 pairs of jeans, and 2 pairs of boots. She wants to pack two shirts, one pair of jeans and a pair boots. In how many ways can this be done?		1 1
Total Score:		