Name: _____

School: _____

Instructions

Please read the following instructions carefully.

- **Write your name and school in the appropriate area of this sheet.**

- The test will be 30 minutes long and contains 10 problems.

- You will receive one point for each correct answer and zero points for each black or incorrect answer.

- Only the answers written on the this answer sheet will be scored.

- Because there is no penalty for wrong answers, you should answer each question, even if you have to write a complete guess.

- On average, you have three minutes per problem. If you're stuck on one problem, you should move on to the next one and come back later if you have time.

- Once the test starts, you may separate this answer sheet from the rest of the test.

- Good luck!

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

For Grader Use Only

Score	Initials

1. Compute $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 - 9 - 8 - 7 - 6 - 5 - 4 - 3 - 2 - 1$.

2. What is the largest 5-digit number such that all 5 digits are distinct and no 2 consecutive digits can be next to each other? For example, 13579 is OK, but 23156 and 14779 are not.

3. Isaac flips a fair coin 5 times. What is the probability that he gets more heads than tails?

4. How many factors of 200 are divisible by 5?

5. What is the product of all 10 digits, thought of as numbers?

6. Equilateral triangle ABC has an area of 1. Equilateral triangle DEF is constructed by connecting the midpoints of AB, BC, and AC. Equilateral triangle GHI is constructed by connecting the midpoints of DE, EF, and DF. What is the area of triangle GHI?

7. $\sqrt{29}$ lies between two consecutive integers. Find the sum of these two integers.

8. Ariana is thinking of a real number x that is 1/16 of its cube. What are the three possibilities for the number x?

9. A frog has fallen into a pit 30 feet deep. Every day, it jumps up 3 feet, but at night it slides down 2 feet. How many days does it take for the frog to jump out of the pit? Be careful!

10. William's scores on his first four math exams are 75, 87, 93, and 81. If he has one more math exam left, what will be the highest possible value for his median score on all 5 exams?