

Problem 1. What is $\frac{2+4+6}{1+3+5} - \frac{1+3+5}{2+4+6}$?

Problem 2. Mr. Green measures his rectangular garden by walking two of the sides and finding that it is 15 steps by 20 steps. Each of Mr. Green's steps is 2 feet long. Mr. Green expects a half a pound of potatoes per square foot from his garden. How many pounds of potatoes does Mr. Green expect from his garden?

Problem 3. On a particular January day, the high temperature in Lincoln, Nebraska, was 16 degrees higher than the low temperature, and the average of the high and the low temperatures was 3° . In degrees, what was the low temperature in Lincoln that day?

Problem 4. When counting from 3 to 201, 53 is the 51st number counted. When counting backwards from 201 to 3, 53, the n^{th} number counted. What is n ?

Problem 5. Positive integers a and b are each less than 6. What is the smallest possible value for $2 \cdot a - a \cdot b$?

Problem 6. The average age of 33 fifth-graders is 11. The average age of 55 of their parents is 33. What is the average age of all these parents and fifth-graders?

Problem 7. A wire is cut into two pieces, one of length a and the other of length b . The piece of length a is bent to form an equilateral triangle, and the piece of length b is bent to form a regular hexagon. The triangle and the hexagon have equal area. What is $\frac{a}{b}$?

Problem 8. In triangle ABC , medians AD and CE intersect at P , $PE = 1.5$, $PD = 2$, and $DE = 2.5$. What is the area of $AEDC$?

Problem 9. Alex has 75 red tokens and 75 blue tokens. There is a booth where Alex can give two red tokens and receive in return a silver token and a blue token, and another booth where Alex can give three blue tokens and receive in return a silver token and a red token. Alex continues to exchange tokens until no more exchanges are possible. How many silver tokens will Alex have at the end?

Problem 10. Find all positive integers N for which the product $(1 \cdot 2 \cdot 3 \cdots N)$ is evenly divisible by the sum $(1 + 2 + 3 + \cdots + N)$.