

$$B > \frac{1}{n} \sum_{i=1}^n x_i$$

(Be greater than average)

Potpourri – 7th Grade

- 2 points:** What is the greatest common factor of the number that is the least common multiple of 3 and 5, and the number that is the least common multiple of 12 and 15?
- 2 points:** Using each of the digits 1 through 6 exactly once to form two three-digit numbers, what is one-third of the smallest possible sum of the two numbers?
- 2 points:** The digits 2, 0, 1, and 5 are written in that order the first time. The second time, the digits are written starting with the 0: 0152. Each following occurrence starts with the next rightmost digit, resulting in the pattern of 2015, 0152, 1520, 5201, 2015, etc. What is the sum of the 2014th, 2015th, and 2016th digits that would be written?
- 3 points:** What is the sum of the digits when the base-10 number 2015_{10} is written in base 3?
- 3 points:** An 8×8 array of squares is filled from left to right and from top to bottom with the positive multiples of 4, starting with 4 in the upper left hand corner. What is the sum of the numbers that are in each of the four corners?
- 3 points:** What is the sum of the distinct prime factors of 2015?
- 3 points:** Candice has a mischievous way of making others believe they have her passcode to her locker: she hides a five-digit code, 24350 in plain sight, but such that one of the digits is not the correct one. She has given her best friend the following clues about the correct code:
 - The code is divisible by 3 and 5.
 - The code is not divisible by 100.
 - The incorrect digit is greater than its corresponding correct digit.

What is the sum of the digits in the correct five-digit code?
- 4 points:** If it takes 7 students 4 days to solve 21 WSMC problems, how many grueling days would it take only 3 students to solve 165 WSMC problems? **Express your answer to the nearest tenth of a day.**
- 4 points:** The sum of 8 and p , the sum of 56 and q , and the sum of 95 and r are all equal. If p , q , and r are all prime, what is the value of $p + q + r$?
- 4 points:** What is the sum of the digits in the number that is equal to the positive difference of 10^{50} and 15?