

Washington State Math Championship – 2009
Potpourri Grade – 5th Grade

WASHINGTON STATE
MATH CHAMPIONSHIP



BLAINE SCHOOL DISTRICT

ConocoPhillips
Ferndale Refinery

1. While reading the book “Why Math Competitions Rock”, Sue decided to turn to a random part of her book and multiply the two page numbers that were showing. If she found the product of the page numbers was 7832, what were the two page numbers?
2. What is the next number in the following sequence?
3, 4, 8, 17, 33, 58, ____
3. Mr. Smith has three children, Moe, Joe, and Poe. Mr. Smith tells you that the product of his children’s ages is 36, that Moe and Joe are twins, and that Poe, the oldest child, is at least two years older than his brothers. If all of the children’s ages are single digits, what is Poe’s age?
4. What is the smallest positive integer that is divisible by each of the numbers one through seven?
5. Craig is able to collect 20 pinecones in an hour, while his friend Aaron is able to collect 40 pinecones in an hour. If they were to work together, how long, in minutes, would it take them to collect 195 pinecones?
6. Express the repeating decimal $0.\overline{315}$ as a reduced fraction.
7. After paying for a cup of coffee during his lunch break, Pinocchio received \$0.92 in change. When he got back to work, he told his friend that he had received eight coins in change. How many pennies did he receive?
8. What is the greatest common divisor of $2^5 \times 3^2 \times 5^4$ and $2^4 \times 3^7 \times 5^3$?
9. Suppose that each of letters M, A, T, H, and S represents a different digit (0 through 9). If S times the four-digit number MATH is equal to the four-digit number SMTM, what is the sum $M + A + T + H + S$?
10. What percentage of the squares of the one and two-digit positive integers have 1 as their units digit? **Express your answer to the nearest whole number percent.**