

CONNECTICUT STATE ASSOCIATION OF MATH LEAGUES
State Math Match, 2023

Please write your answers on the answer sheet provided.

Round 1: Arithmetic and Number Theory

- 1-1 The price of an object is initially \$80. The price is increased by 15%, and then by 15% again. Find the final price of the object in cents. (Do not include a unit in your answer.)
- 1-2 A cashier needs to give a customer 23 cents in change. The change is to be made with k coins consisting of pennies, nickels, and/or dimes. Find the number of possible values of k .
(Note: A penny is worth 1 cent, a nickel is worth 5 cents, and a dime is worth 10 cents.)
- 1-3 The letters A , B , and C represent different digits. A is prime, $A - B = 4$, and the number $\underline{A}\underline{A}\underline{A}\underline{B}\underline{B}\underline{B}\underline{C}$ is prime. Find $A + 2B + 3C$.
(Note: The notation $\underline{R}\underline{S}\underline{T}$ represents the number whose digits are R , S , T , in that order.)