ACMAT100 Spring 2023
Professor Manguba-Glover
Classwork 5 Name: _____

1. Solve for the specified variable:

   (a) $y = 7x + 13$ for x

   (b) $B = \frac{1}{4}(q + z)$ for q

   (c) $A = \frac{2x + y + 3z}{5}$ for z

   (d) $F = \frac{9}{5}C + 32$ for C

2. Solve the following:

   (a) Robert invested \$700 into a certificate of deposit earning 6% interest compounded quarterly. How much is the certificate of deposit worth 5 years later?

   (b) Steve borrowed \$500 from his credit union for 2 years. The simple interest that he paid was \$52.90. What simple interest rate was Steve charged?

3. (a) The formula for the surface area of a rectangular solid is $S = 2lw+2wh+2lh$. Where l is the length, w is the width, and h is the height. Find the surface area of a rectangular solid with length 7, width 4, and height 3.

   (b) As a project for his physics class, Paul launches a water rocket directly upward with an initial velocity of 147 feet per second. The rocket is sitting on the ground, thus the initial height is 0 feet.

      i. What is the height of the rocket after 1 second?

      ii. What is the height of the rocket after 4 seconds?