

# Program 1: Find roots of second order polynomials

- Write a C program
  - Input floating point coefficients (a1, a2, a3) of a 2<sup>nd</sup> order polynomial
  - Compute the discriminant  $D = B^2 - 4AC$
  - Check to see if D is < 0, = 0 or > 0.
  - Accordingly print  $\frac{-B}{2A} \pm i \frac{\sqrt{D}}{2A}$  for complex or  $\frac{-B}{2A}$  for repeated roots or  $\frac{-B \pm \sqrt{D}}{2A}$  real and distinct roots
- Make the output as pretty as you can
- Make the program readable with adequate documentation
- Upload the program *some\_program\_name.c* in moodle by Sunday, September 1, 2019, before 5:00 pm.

# Program 2: Check if the number entered is Perfect Number

- A *perfect number* is a positive integer that is equal to the sum of its positive divisors. For instance, 6 has divisors 1, 2 and 3 (excluding itself), and  $1 + 2 + 3 = 6$ , so 6 is a perfect number.
- Write a C program
  - To input an integer  $n$
  - Check if it is Perfect
- Make the output as pretty as you can
- Make the program readable with adequate documentation
- Upload the program *some\_program\_name.c* in moodle by Sunday, September 1, 2019, before 5:00 pm