ANSWERS

A) (_____ , _____ , _____)

B) _____

C) (_____ , _____ , _____)

A) One solution of the quadratic equation $Ax^2 + Bx + C = 0$ is $\dfrac{5 + i\sqrt{3}}{2}$.

If A, B and C are integers, $A > 0$, and the greatest common factor of A, B and C is 1, compute the ordered triple (A, B, C).

B) J and K are positive integers.
The ordered pair $(x, y) = (J, K)$, where $J + K < 100$, satisfies the equation $x + 2 = y^2 - 7$.
Compute the sum of the largest and smallest possible values of J.

C) The quadratic equation $Ax^2 + Bx + C = 0$, where A, B and C are relatively prime integers and

$A > 0$, has roots $r_1 = \sqrt{\dfrac{40}{9} + \dfrac{41}{4}}$ and $r_2 = B + 2$.

Compute the ordered triple (A, B, C).