ANSWERS

A)   (_____ , _____)

B)   (_____ , _____)

C) _____

A) In simplified form, $\dfrac{1 - \dfrac{1}{\sqrt{-6}}}{\sqrt{-2}} - \left(\dfrac{1 - \sqrt{-2}}{2}\right)^2$ may be expressed as $\dfrac{A\sqrt{3} + B}{12}$.

Determine the ordered pair (A, B).

B) $\left(\sqrt{2} + i\sqrt{3}\right)^{600} \cdot \left(\sqrt{2} - i\sqrt{3}\right)^{600}$ may be expressed as A^B in many ways, where A and B are positive

integers. If A is the largest possible three-digit integer, determine the ordered pair (A, B).

C) If $\dfrac{2x + yi}{2 + i} = \dfrac{5}{5 + i}$, compute $x + y$, where x and y are real numbers.