**ANSWERS**

A) _____

B) ( _____ , _____ )

C) _____ years

$$\boxed{\text{***** NO CALCULATORS IN THIS ROUND *****}}$$

A) Compute the lengths of the sides of a right triangle with sides $\sqrt{n}, \sqrt{n+4}, \sqrt{n+8}$
Be sure to express all radicals in simplified form.
List the side lengths from smallest to largest.

B) Despite the arbitrary constant, the slope of the line through $P(6 - a, 4)$ and $Q(3, 7 - a)$ <u>always</u> has a numerical value of $m$ unless $a = k$. Compute the ordered pair $(m, k)$.

C) Five years ago, Sam and David's ages were in a 5 : 2 ratio. 15 years from now Sam will be twice as old as David will be 7 years from now. In how many years (from now) will the ratio of Sam's age to David's age be 10 : 7?