



Core Mathematics S2(GCE)

Practice Question 8

Standard A[★]

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**CRITICAL THINKING IS THE KEY TO SOLVE REAL WORLD PROBLEMS.
CHILDREN MUST BE TAUGHT HOW TO THINK, NOT WHAT TO THINK.
A GREAT TEACHER WILL BE CREATING STUDENTS TO DO NEW THINGS
THROUGH CRITICAL THINKING, NOT SIMPLY REPEATING WHAT OTHER
GENERATIONS HAVE DONE BEFORE. WE DO NOT NEED ANOTHER
ALBERT EINSTEIN OR ISAAC NEWTON.... WE NEED A PERSON BETTER
THAN THEM.**

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Question:

Given that the variable X having the probability density function.

$$f(x) = \begin{cases} kx & 0 \leq x \leq 50 \\ k(100 - x) & 50 \leq x \leq 100 \\ 0 & \text{Otherwise} \end{cases}$$

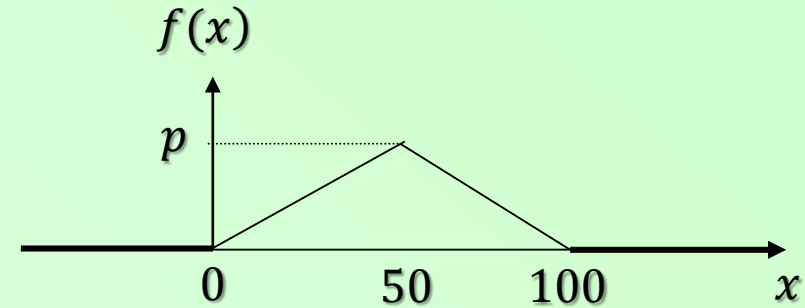


Figure 1

Figure 1 shows the sketch of the above probability density function $f(x)$.

- (b) Find the value of the constant p (2 marks)
- (c) Hence, find the constant k (1 mark)
- (d) Write down the mean (1 mark)
- (e) Find $P(70 < X < 120)$ (2 marks)

For the answers please contact:

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Traditional or Online classes

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