



# Core Mathematics S1(GCE)

Practice Question 8

Standard A<sup>★</sup>

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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.**

**MR.S.V. SWARNARAJA**

## Question:

$x$	1	5	8	4	2	6	7
$y$	3	11	17	$m$	5	13	15

(a) If the product moment correlation coefficient  $r = 1$ , then find the value of  $m$  in the above table

(3 marks)

$x$	$y$
$2^{500}$	$\frac{5}{7}$
$-\sqrt{123}$	$5^{250}$

(b) Find the *exact* value of product moment correlation coefficient for the above data.

Give a reason for your answer.

(2 marks)

# Golden Rules

- $s_{xx} = \Sigma x^2 - \frac{(\Sigma x)^2}{n} = \Sigma(x - \bar{x})^2$
- $s_{yy} = \Sigma y^2 - \frac{(\Sigma y)^2}{n} = \Sigma(y - \bar{y})^2$
- $s_{xy} = \Sigma xy - \frac{(\Sigma x)(\Sigma y)}{n} = \Sigma(x - \bar{x})(y - \bar{y})$
- $r = \frac{s_{xy}}{\sqrt{s_{xx}s_{yy}}}$

**For the answers please contact:**

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*Traditional or Online classes*

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