

Please show **all** your work! Answers without supporting work will not be given credit.

Clearly mention what theorem(s), if any, you are using.

Write answers in spaces provided.

You have 12 minutes to complete this Quiz.

You can get MAXIMUM $(6 + 6) = 12$ marks.

Name:

1. Solve the following LPP:

Maximize $2x + 3y$

subject to the constraints

$$3x + y \leq 4$$

$$x + 4y \leq 5$$

$$x \geq 0$$

$$y \geq 0$$

You can either use the fundamental theorem or just draw a picture to justify your answer.

2. Find whether the following series is convergent:

$$\sum_{n=3}^{\infty} \frac{\sin n}{\cos^3 n}$$

Clearly mention what test(s) you are using.