**JLL PST - Consolidation 14**

**Total Marks: 16**

**Question 17**

*[Edexcel C3 Jan 2007 Q8iia]*

Given that

, and ,

express in terms of .

**Correct answer:**

**Their answer:**

 **(2 marks)**

**Question 4**

*[Edexcel C3 Jan 2007 Q2b Edited]*

It can be shown that , .

Show that for all values of .

*Input note: write*  in a form that explicitely show it is positive for all .

**Correct answer:**

**Their answer:**

 **(3 marks)**

**Question 11**

*[Edexcel C3 Jan 2007 Q6a Edited]*

The function is defined by

, and

Find the inverse function of .

**Correct answer:**

**Their answer:**

 **(4 marks)**

**Question 3**

*[Edexcel C3 Jan 2007 Q2a Edited]*

Show that , where and are constants to be found.

**Correct answer:**

,

**Their answer:**

,

 **(4 marks)**

**Question 16**

*[Edexcel C3 Jan 2007 Q8i Edited]*

Prove that

where and are constants to be found.

**Correct answer:**

,

**Their answer:**

,

 **(3 marks)**