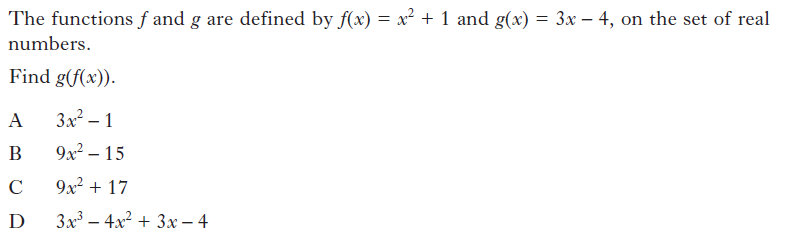
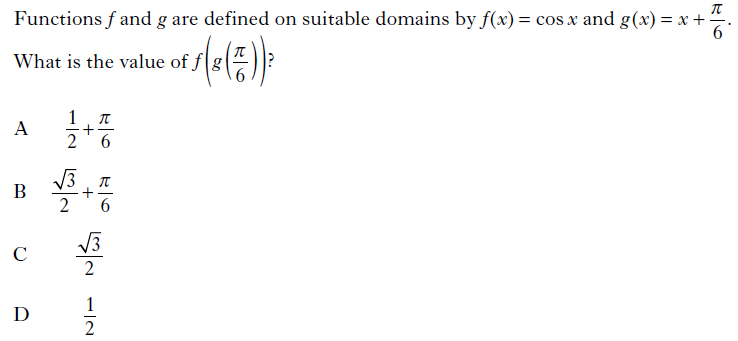
HIGHER MATHEMATICS

**Exam Questions on Functions & Graphs**

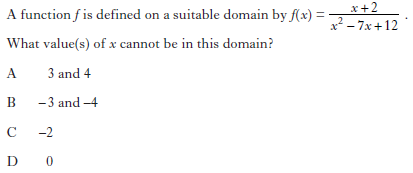
**1. Non-Calculator (Multiple Choice)**



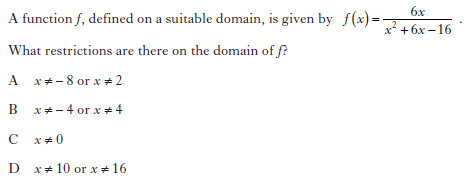
**2. Non-Calculator (Multiple Choice)**



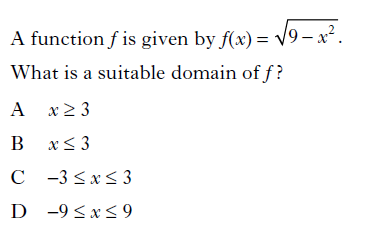
**3. Non-Calculator (Multiple Choice)**



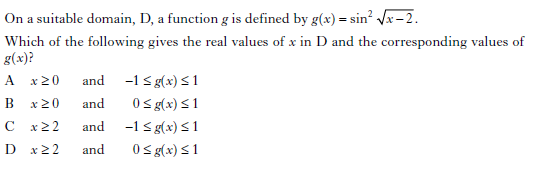
**4. Non-Calculator (Multiple Choice)**



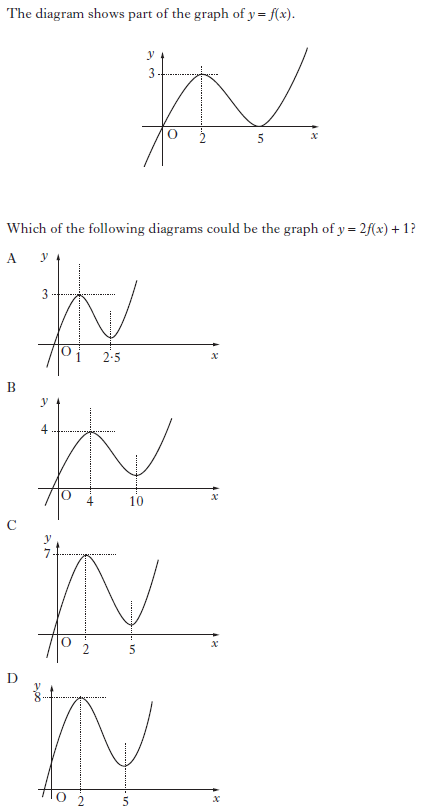
**5. Non-Calculator (Multiple Choice)**



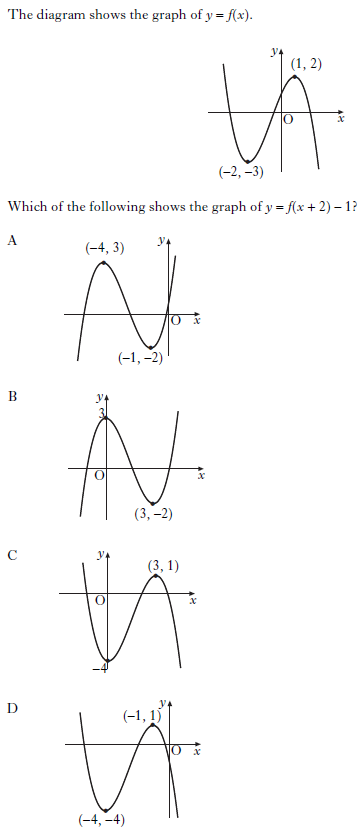
**6. Non-Calculator (Multiple Choice)**



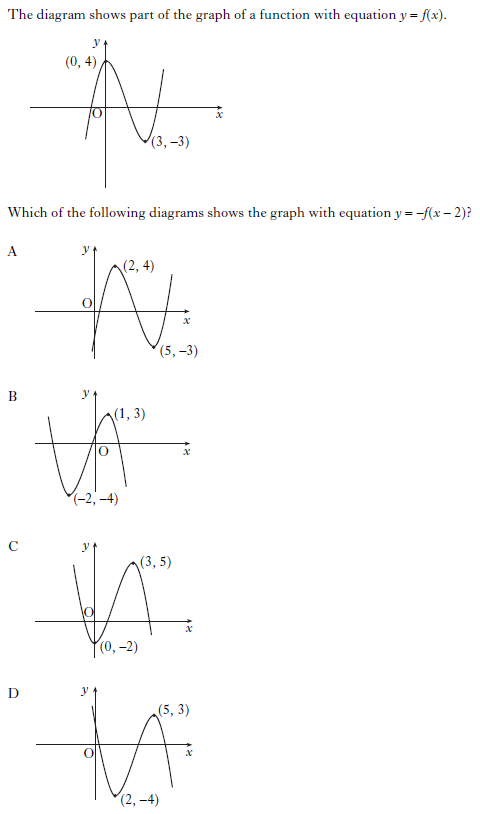
**7. Non-Calculator (Multiple Choice)**



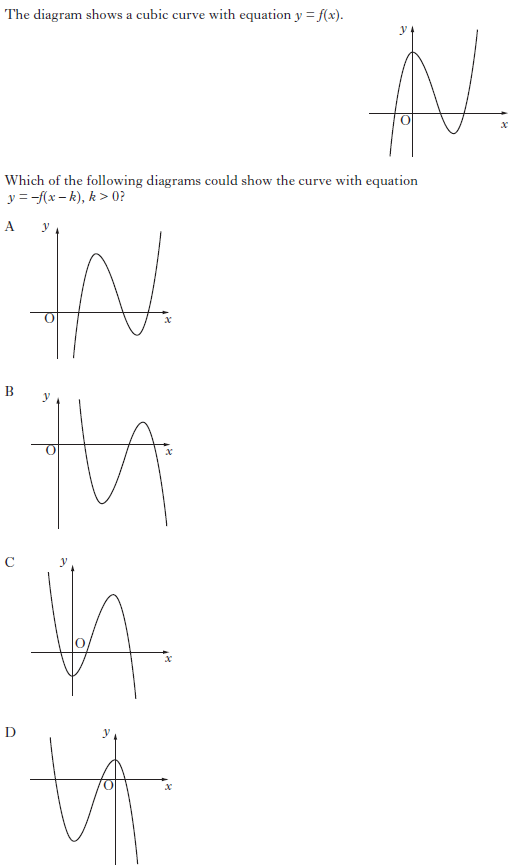
**8. Non-Calculator (Multiple Choice)**



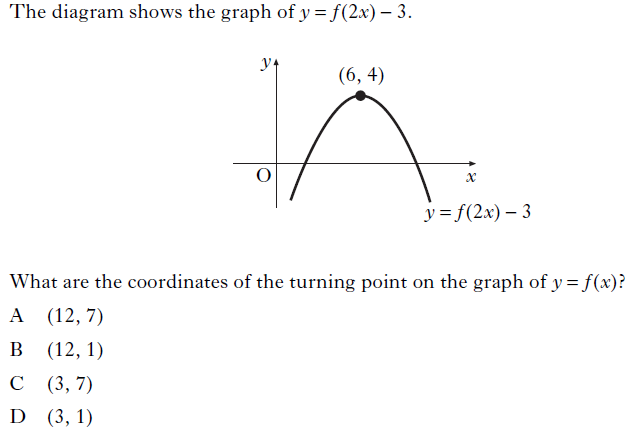
**9. Non-Calculator (Multiple Choice)**



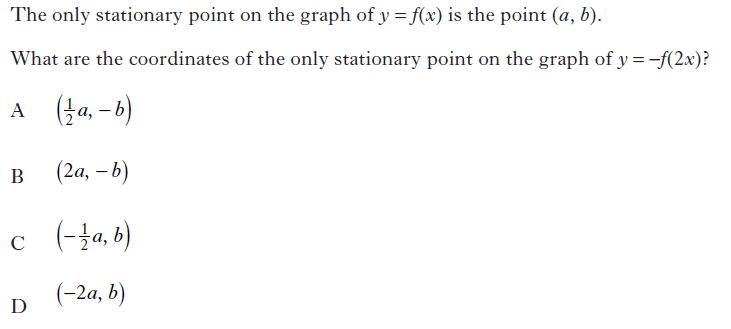
**10. Non-Calculator (Multiple Choice)**



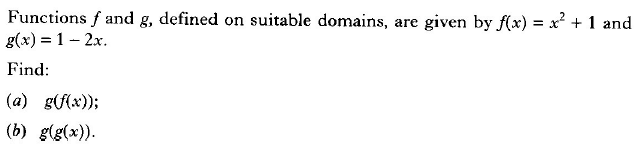
**11. Non-Calculator (Multiple Choice)**



**12. Non-Calculator (Multiple Choice)**



**13. Non-Calculator**



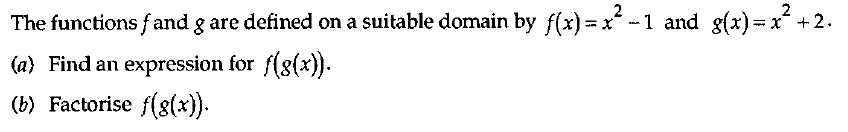
**14. Non-Calculator**

Functions *f* and *g*, defined on suitable domains, are given by  and

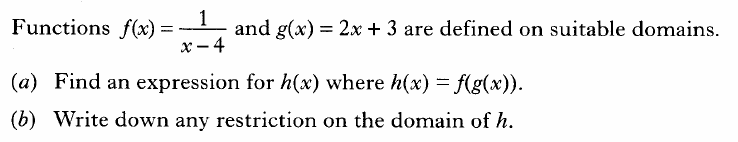
.

Find  and .

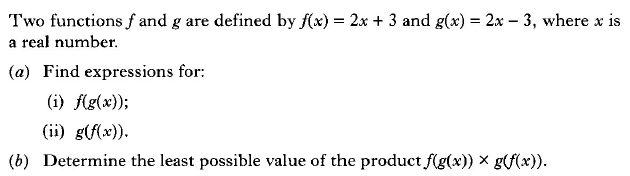
**15. Non-Calculator**



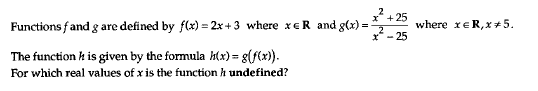
**16. Non-Calculator**

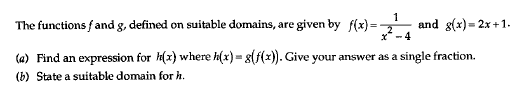


**17. Non-Calculator**



**18. Non-Calculator**

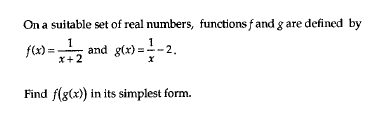


**19. Non-Calculator** 

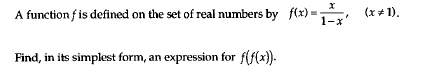
**20. Calculator**



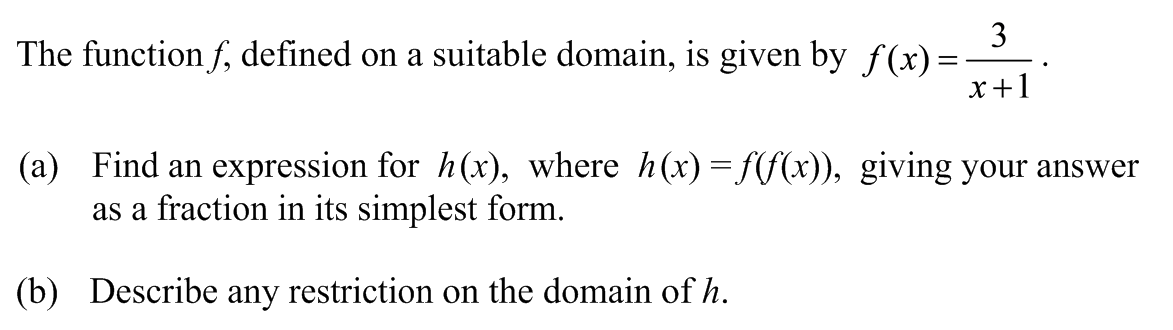
**21. Non-Calculator**



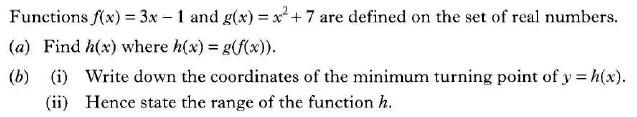
**22. Non-Calculator**

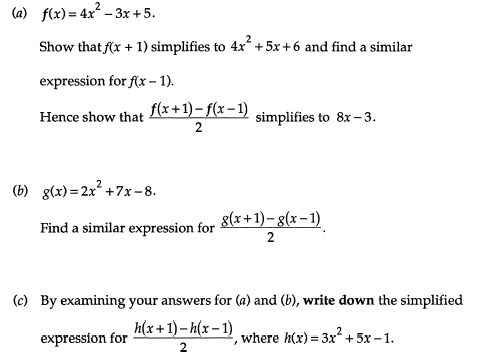


**23. Non-Calculator**

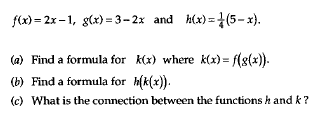


**24. Non-Calculator**



**25. Non-Calculator** 

**26. Non-Calculator**



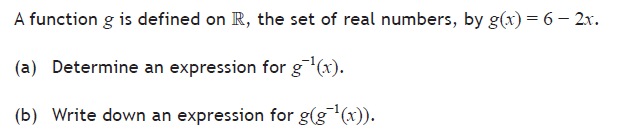
**27. Non-Calculator**

Functions *f* and *g* are defined on the set of real numbers.

The inverse functions  and  both exist.

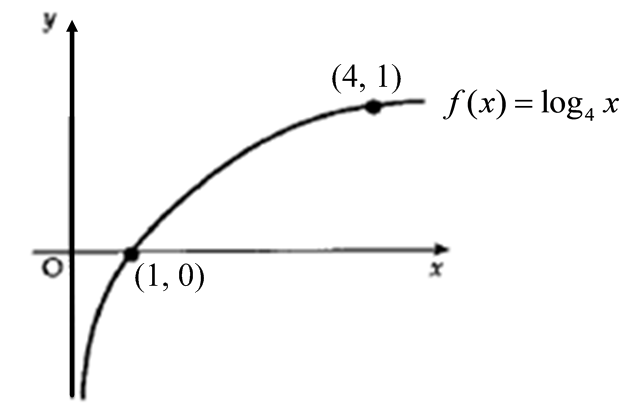
1. Given , find .
2. If , write down the value of .

**28. Non-Calculator**



**29. Non-Calculator**

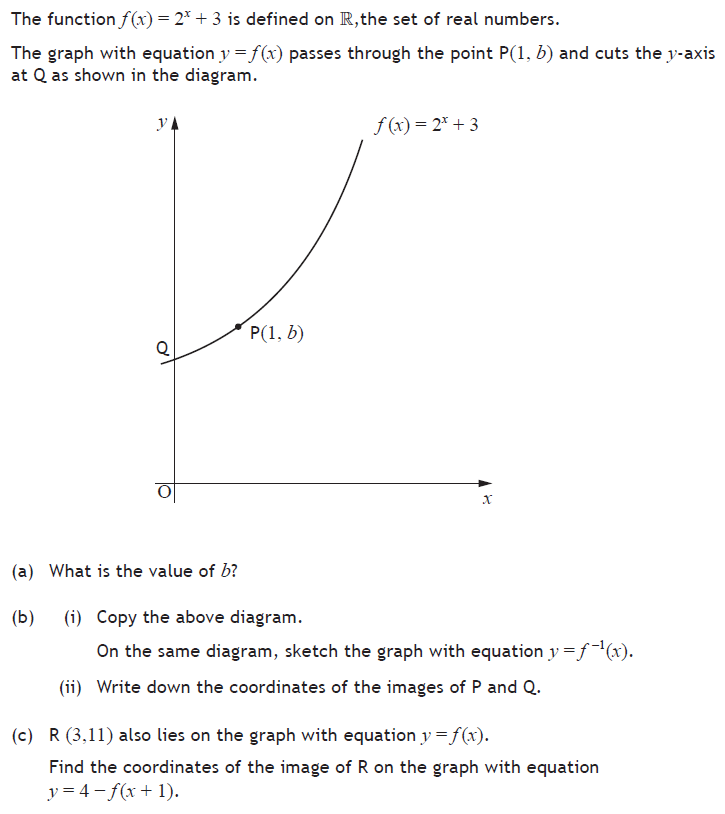
The diagram below shows the graph of the function , where .



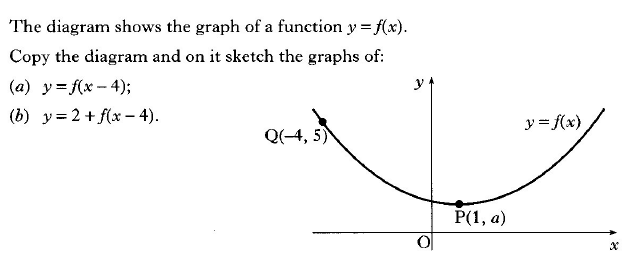
The inverse function, , exists.

Sketch the graph of the inverse function.

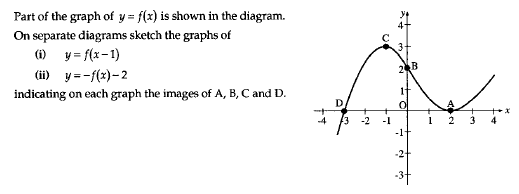
**30. Non-Calculator**



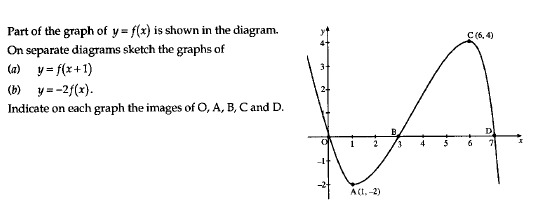
**31. Calculator**



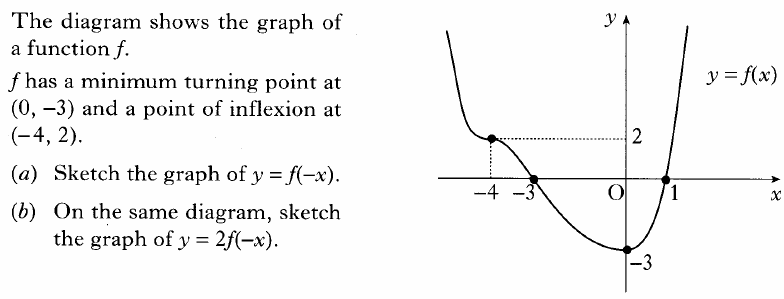
**32. Non-Calculator**



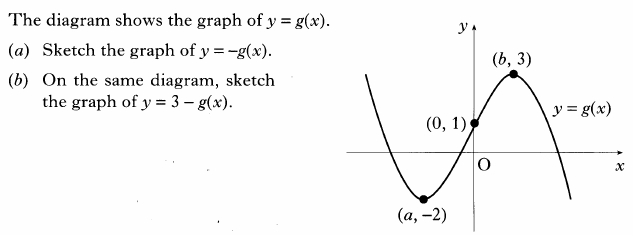
**33. Non-Calculator**



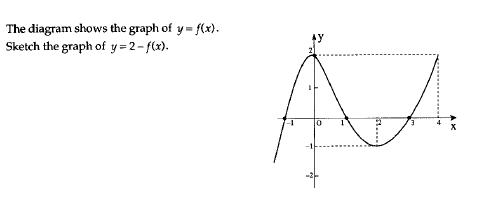
**34. Calculator**



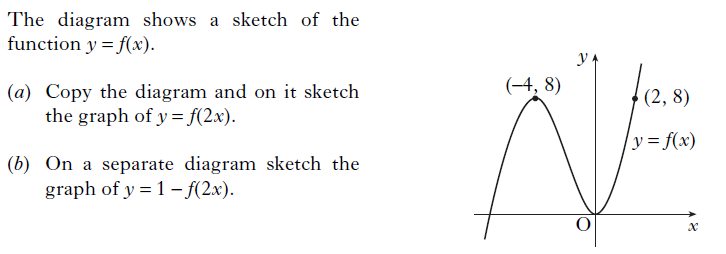
**35. Non-Calculator**



**36. Non-Calculator**



**37. Calculator**



**38. Non-Calculator**

