

(a) Using a calculator, or otherwise, calculate the EXACT value of

(i) 
$$\frac{1\frac{4}{5} - \frac{1}{3}}{2\frac{2}{5}} = \underline{\hspace{2cm}}$$
 (2 marks)

(ii) 
$$\sqrt{1.5625} + (0.32)^2 = \underline{\hspace{2cm}}$$
 (2 marks)

(b) Given that  $f(x) = \frac{2x+1}{3}$  and  $g(x) = 4x+5$ , determine the values of:

(i)  $fg(2)$  (3 marks)

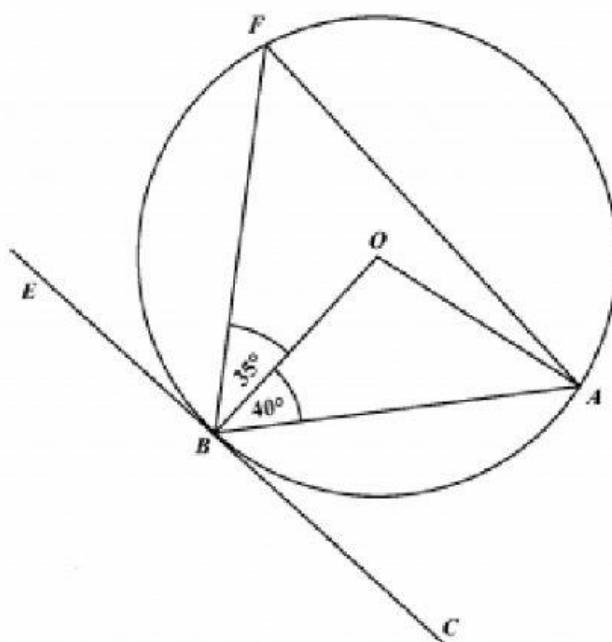
(ii)  $f^{-1}(3)$  (3 marks)

(a) The incomplete table below shows one pair of values for  $A$  and  $R$  where  $A$  is directly proportional to the square of  $R$ .

$A$	36		196
$R$	3	5	

Complete the table above.

(a) The diagram below, **not drawn to scale**, shows a circle with centre  $O$ .  $EBC$  is a tangent to the circle.  $\angle OBA = 40^\circ$  and  $\angle OBF = 35^\circ$ .



Calculate, giving reasons for your answer, the measure of

(i) $\angle EBF$	(1 mark)
(ii) $\angle BOA$	(2 marks)
(iii) $\angle AFB$	(2 marks)
(iv) $\angle OAE$	(2 marks)