

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

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

(ii) $\sqrt{1.5625} + (0.32)^2 =$ (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)

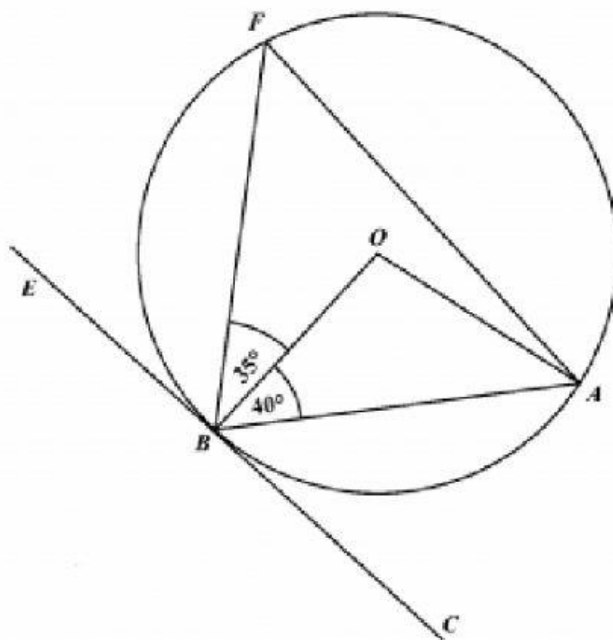
(ii) $f^{-1}(3)$ (3 marks)

- (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

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