12 The function f is defined by $f(x) = 15\cos^2(3x+1.5) + 7\sin(3x+1.5) - 13$ for $-0.3 \leqslant x \leqslant 0.5$, where x is in radians.

(a) Solve the equation $f(x) = 0$. [5]

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(b) Find the x-coordinates of the two stationary points on the curve $y = f(x)$. [5]

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Question 13 is printed on the next page.

13 Solve the equation $64^{x+\frac{1}{3}} + 2^{3x} - 3 = 0$. [4]

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