

Higher Maths
SQA 2015 Paper 2
Question 7



(a) Find $\int (3 \cos 2x + 1) dx$. 2

(b) Show that $3 \cos 2x + 1 = 4 \cos^2 x - 2 \sin^2 x$. 2

(c) Hence, or otherwise, find $\int (\sin^2 x - 2 \cos^2 x) dx$. 2

Answers:

(a) $\frac{3}{2} \sin 2x + x + c$

(b) Proof. See marking instructions.

(c) $-\frac{3}{4} \sin 2x - \frac{1}{2} x + c$