

9 (a) Show that, for small values of θ measured in radians

$$\cos 4\theta + 2 \sin 3\theta - \tan 2\theta \approx A + B\theta + C\theta^2$$

where A , B and C are constants to be found.

[3 marks]

9 (b) Use your answer to part (a) to find an approximation for

$$\cos 0.28 + 2 \sin 0.21 - \tan 0.14$$

Give your answer to three decimal places.

[2 marks]