

10.

**In this question you must show all stages of your working.**

**Solutions relying entirely on calculator technology are not acceptable.**

(a) Show that

$$\cos 3A \equiv 4 \cos^3 A - 3 \cos A$$

**(4)**

(b) Hence solve, for  $-90^\circ \leq x \leq 180^\circ$ , the equation

$$1 - \cos 3x = \sin^2 x$$

**(4)**