**7D Solving Equations**

1. Solve $4cos\left(θ-30\right)=8\sqrt{2}sinθ$ in the range $0\leq θ\leq 360$. Give answers to 1dp.
2. Solve $3cos2x-cosx+2=0$ in the range $0\leq x\leq 360$. Give answers to 1dp where appropriate.
3. Solve $2tan2ytany=3$ in the range $0\leq y\leq 2π$. Give answers to 2dp.

a) By expanding $sin⁡(2A+A)$, show that:

$$sin3A≡3sinA-4sin^{3}A$$

b) Hence, or otherwise, solve:

$16sin^{3}θ-12sinθ-2\sqrt{3}=0$, in the range $0<θ<2π$