Mastery Check

1. Factor each expression.

   a) $1 - \cos^2 x$ **b)** $4\tan^2 \theta + \tan \theta - 3$ **c)** $\csc^2 x - \cot x - 3$

2. Use the substitution $x = 5\sin \theta$, $0 < \theta < \dfrac{\pi}{2}$, to write $\sqrt{25 - x^2}$ as a trigonometric function of θ.