11th November

Solve

\[ 3x^2 - 3 > 4x + 1 \]

Find \( x \)

Write \( 18\cos30^\circ + 2\tan60^\circ \) in the form \( a\sqrt{b} \)

The population of an island is decreasing exponentially.

Martin has begun to monitor the population each year.
Year 6 - Population 3000
Year 8 - Population 2000

What was the population in Year 2?

Find the coordinates of the points where the circle \( x^2 + y^2 = 8 \) and the line \( y = 2x + 2 \) intersect.