18th July

\[ g(x) = \frac{2x - 9}{5} \]

Find

\[ g^{-1}(x) \]

Sketch \( y = 4\sin(x) \)

[Graph of \( y = 4\sin(x) \)]

Sketch \( y = 1 + \cos(x) \)

[Graph of \( y = 1 + \cos(x) \)]

Find the nth term of

\(-12 - 9 - 4 3 \ldots\)

Prove algebraically that

\((4n + 1)^2 - (2n - 1)\) is an even number

for all positive integer values of \( n \).