22nd February

Solve $100x^2 - 169 = 0$

$2a(3x - 4) + 5(ax + 6) \equiv 77x + b$

Work out a and b

The transformation matrix **M** is

$\begin{pmatrix} 1 & a \\ -4 & 1 \end{pmatrix}$

The image of the point $(b, \, 3)$ under **M** is $(14, \, -5)$

Find a and b

$f(x) = 2x^3 - 8x^2 + 30x + 2$

Show that f(x) is an increasing function for all values of x.