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3 The sum of the first two terms of a geometric progression is 9.
The sum to infinity of this geometric progression is 25.

(a) Find the possible values of the common ratio of this geometric progression. [4]

(b) Find the first term of this geometric progression for each possible value of the common ratio. [2]

4 **(a)** Show that $2x^2 + 5x + 3$ can be written in the form $2(x + a)^2 + b$, where a and b are constants to be found. [2]

(b) Hence write down the coordinates of the stationary point on the curve $y = 2x^2 + 5x + 3$. [2]

A function f is such that $\mathrm{f}(x) = 2x^2 + 5x + 3$, for $x \geqslant p$, where p is a constant.
It is given that f^{-1} exists.

(c) **(i)** Write down the least possible value of p. [1]

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