

Advanced Higher Maths
SQA 2016 Paper
Question 7

A is the matrix $\begin{pmatrix} 2 & 0 \\ \lambda & -1 \end{pmatrix}$.

- (a) Find the determinant of matrix A . 1
- (b) Show that A^2 can be expressed in the form $pA + qI$, stating the values of p and q . 3
- (c) Obtain a similar expression for A^4 . 2
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Answers:

- (a) -2
- (b) $p = 1, q = 2$
- (c) $5A + 6I$