

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
DEPARTMENT OF MATHEMATICS AND STATISTICS

SECTION 3.5

Math 2050 Worksheet

WINTER 2026

For practice only. Not to be submitted.

1. For each of the following matrices, determine if A is diagonalisable. If so, find an invertible matrix P and a diagonal matrix D such that $P^{-1}AP = D$.

(a) $A = \begin{bmatrix} 5 & -2 \\ 1 & 2 \end{bmatrix}$

(b) $A = \begin{bmatrix} 2 & 1 \\ -1 & 0 \end{bmatrix}$

(c) $A = \begin{bmatrix} 2 & -16 & -2 \\ 0 & 5 & 0 \\ 2 & -8 & -3 \end{bmatrix}$

(d) $A = \begin{bmatrix} 8 & 9 & -9 \\ 0 & 2 & 0 \\ 4 & 6 & -4 \end{bmatrix}$