MATB41 WEEK 7 QUIZ 2 LEC02

Question 1

Let $u = u(x, t)$, and consider the following variant of the **heat equation**:

$u_t - ku_{xx} + bu_x = 0$,

where k, b are constants.

Consider the change of variables: $v = x - bt$, $w = t$

Simplify the above PDE in terms of the new variables v and w.

You do **not** need to solve the PDE.