

Attendance Quiz 20

Name: _____ Date : _____

1. Let $T : P_2 \rightarrow P_3$ be the transformation that maps a polynomial $p(t)$ into the polynomial $(t+5)p(t)$.

(a) Find the image of $p(t) = 2 - t + t^2$.

(b) Show that T is a linear transformation.

(c) Find the matrix for T relative to the bases $\{1, t, t^2\}$ and $\{1, t, t^2, t^3\}$.