MATH 224

Selected Hints and Answers for Assignment 4

Chapter 2: 35, 40, 42, 43

40: Are any of these vectors orthogonal to other vectors? Point in the same direction as other vectors?

42: Integration by parts on te^t, change of variable $u = 1 + t^2$ on third component. Among the constants of integration may be 1, 0, and -2/3.

43: To find $\int \tan t \, dt$, begin by writing tangent as sine/cosine. To find $\int \ln t \, dt$, integration by parts may be useful. A. Speed is $\sqrt{a^2 + b^2}$. One way to show orthogonality is to show dot product is 0.