1 Problem 2

Exercise 2.3 on p. 42

Solution: $\frac{-1}{\sqrt{10}*\sqrt{14}}$

$V1 =< 1, -3, 0 >$
$V2 =< 2, 1, 3 >$

$$cos(\theta) = \frac{V1 \cdot V2}{\sqrt{1^2 + -3^2 + 0^2} * \sqrt{2^2 + 1^2 + 3^2}}$$

1. $cos(\theta) = \frac{V1 \cdot V2}{\sqrt{1^2 + -3^2 + 0^2} * \sqrt{2^2 + 1^2 + 3^2}}$
2. $V1 \cdot V2 = (1 * 2) + (1 * -3) + (0 * 3) = -1$
3. $\sqrt{1^2 + -3^2 + 0^2} = \sqrt{1 + 9} = \sqrt{10}$
4. $\sqrt{2^2 + 1^2 + 3^2} = \sqrt{4 + 1 + 9} = \sqrt{14}$
5. $cos(\theta) = \frac{V1 \cdot V2}{\sqrt{1^2 + -3^2 + 0^2} * \sqrt{2^2 + 1^2 + 3^2}} = \frac{-1}{\sqrt{10} * \sqrt{14}}$

$$cos(\theta) = \frac{V1 \cdot V2}{\sqrt{1^2 + -3^2 + 0^2} * \sqrt{2^2 + 1^2 + 3^2}} = \frac{-1}{\sqrt{10} * \sqrt{14}}$$

MATLAB v1 = [1, -3, 0]; v2 = [2, 1, 3];
dotV = dot(v1, v2) magV1 = norm(v1) magV2 = norm(v2)
angle = arccos(dotV / (magV1 * magV2))

2 Previous work

A much longer LaTeX 2_ε example was written by Gil [**?**].

3 Results

In this section we describe the results.

4 Conclusions

We worked hard, and achieved very little.