**Problems and Questions**

**Chapter 3 Vectors**

**Questions**

1. Can the sum of the magnitudes of two vectors ever be equal to the magnitude of the sum of the same two vectors? If no, why not? If yes, when?
2. The two vectors shown in Fig. 3-21 lie in an xy plane. What are the signs of the x and y components, respectively, of (a) ~ + Ch, (b) ~ - Ch,and (c) Ch - ~?

A picture containing text, antenna

Description automatically generated

1. Being part of the "Gators," the University of Florida golfing team must play on a putting green with an alligator pit. Figure 3-22 shows an overhead view of one putting challenge of the team; an xy coordinate system is superimposed. Team members must putt from the origin to the hole, which is at xy coordinates (8 m, 12 m), but they can putt the golf ball using only one or more of the following displacements, one or more times: -a: = (8 m)i + (6 m)], Ch = (6 m)], C4 = (8 m)i. The pit is at coordinates (8 m, 6 m). If a team member putts the ball

A picture containing text, electronics

Description automatically generated

into or through the pit, the member is automatically transferred to Florida State University, the arch rival. What sequence of displacements should a team member use to avoid the pit?

Text

Description automatically generated

1. Which of the arrangements of axes in Fig. 3-23 can be labeled "right-handed coordinate system"? As usual, each axis label indicates the positive side of the axis.

A picture containing object, sky, antenna, day

Description automatically generated

Text

Description automatically generated





 A picture containing text, antenna

Description automatically generated

Diagram

Description automatically generated

**Problems**

**Sec3-4 Components Of Vectors**

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Diagram

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text, letter

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Diagram

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text, letter

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated



Text, letter

Description automatically generated

Diagram

Description automatically generated

Text

Description automatically generated



Text

Description automatically generated

Diagram

Description automatically generated

Text

Description automatically generated with medium confidence

Text

Description automatically generated

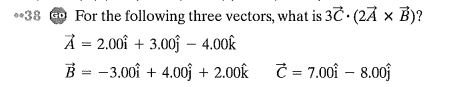
Text

Description automatically generated



Text, letter

Description automatically generated



Text, letter

Description automatically generated

Text, letter

Description automatically generated

Text, letter

Description automatically generated

Text

Description automatically generated

A picture containing chart

Description automatically generated

Text, letter

Description automatically generated

Additional Problems:  
Diagram

Description automatically generated

Text

Description automatically generated

Text, letter

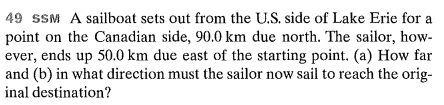
Description automatically generated

Text

Description automatically generated

Text

Description automatically generated



Text, letter

Description automatically generated

Diagram

Description automatically generated

Text, letter

Description automatically generated

Text

Description automatically generated



Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated



Text

Description automatically generated

A close-up of a document

Description automatically generated with low confidence



Text, letter

Description automatically generated

Text, letter

Description automatically generated

Text, letter

Description automatically generated

Text

Description automatically generated

Text, letter

Description automatically generated