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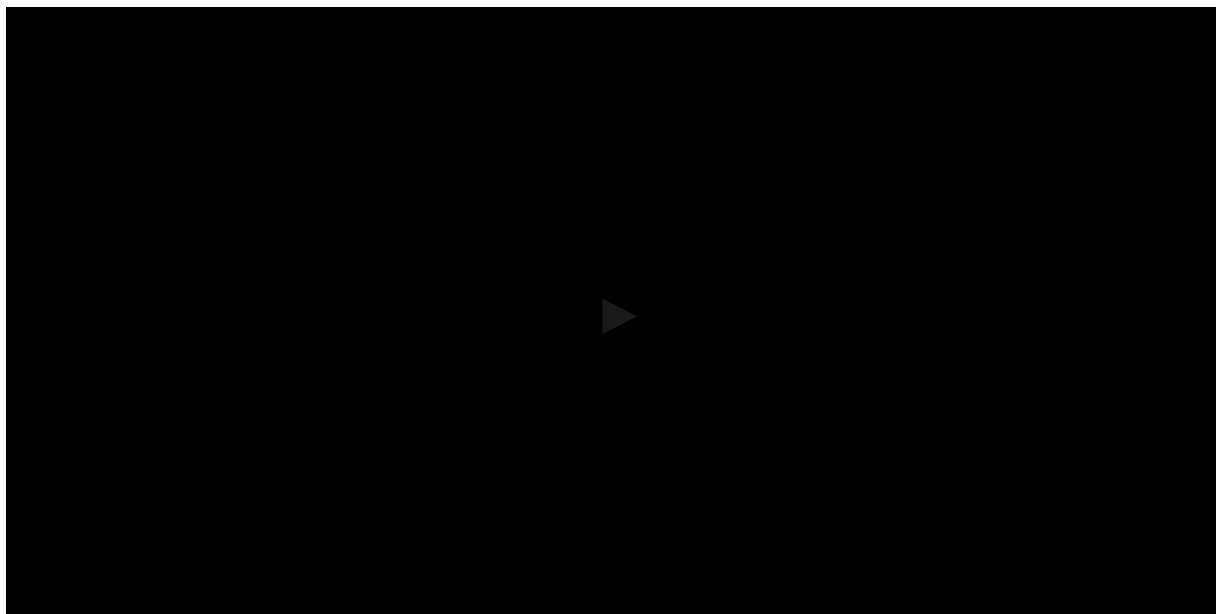
1.3.2 Vector Addition

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Week 1 due Oct 5, 2023 03:12 IST Completed

1.3.2 Vector Addition

Start of transcript. Skip to the end.



Dr. Robert van de Geijn: Let's look at how to add vectors.

We will start with a geometric interpretation in two dimensions.

So to illustrate this, let's start with two vectors.

Vector x is a vector that goes over 4 and, down 3.



Video

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Reading Assignment

0 points possible (ungraded)

Read Unit 1.3.2 of the notes. [\[LINK\]](#)

Done



Submit

Share other examples of how vector addition is used in sports

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Topic: Week 1 / 1.3.2 Parallelogram method for addition

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 Archery

The movement of an arrow in archery due to wind adds the wind velocity vector to the arrow velocity vector resulting in the diagonally calculate...

2

 Biking example





Cyclists experience various forces like wind resistance and gravity while riding. Vector addition helps cyclists determine their net force and direc...

2

Vectors in Sports

I subconsciously would calculate Vectors when I was in F. So, Vectors mainly do with location and positioning, which when taking your direct

Calculator

I subconsciously would calculate vectors when I was in E-Sports. Vectors mainly go with location and positioning, which when taking your direct...	
 sports example	1
A jogger might use vector addition to approximate the distance between their home and current location. If the distance is much shorter than th...	
 Vector addition	3
Vector addition can be seen in soccer as one player running on the field represents a vector and another player running on the other side repres...	
 Week 1 Proofs - Subsection 1.3	7
The videos for answers to assignments are in a mess. 1. The transcript for Homework 1.3.2.3 is wrong. It's not for this video. 2. For Homework 1....	
 Don't Forget to Click Show Answers for the Always, Sometimes, Never Questions	1
When I first took this course, I didn't try to prove the correct answers for the Always, Sometimes, Never questions and forgot to forgot to click S...	

Homework 1.3.2.1

2/2 points (graded)

$$\begin{pmatrix} -1 \\ 2 \end{pmatrix} + \begin{pmatrix} -3 \\ -2 \end{pmatrix} =$$


-4

✓ Answer: -4

0

✓ Answer: 0

Submit

 Answers are displayed within the problem

Homework 1.3.2.2

2/2 points (graded)

$$\begin{pmatrix} -3 \\ -2 \end{pmatrix} + \begin{pmatrix} -1 \\ 2 \end{pmatrix} =$$


-4

✓ Answer: -4

0

✓ Answer: 0

Submit

 Answers are displayed within the problem

Homework 1.3.2.3

1/1 point (graded)

For $x, y \in \mathbb{R}^n$, $x + y = y + x$.

Always

✓ Answer: Always

Explanation

[Transcribed in final section of this week](#)
[Scanned solution from video](#)

Submit

i Answers are displayed within the problem

Homework 1.3.2.4

2/2 points (graded)

$$\left(\begin{pmatrix} -1 \\ 2 \end{pmatrix} + \begin{pmatrix} -3 \\ -2 \end{pmatrix}\right) + \begin{pmatrix} 1 \\ 2 \end{pmatrix} =$$

-3

2

✓ Answer: -3

✓ Answer: 2

Submit

i Answers are displayed within the problem

Homework 1.3.2.5

2/2 points (graded)

$$\begin{pmatrix} -1 \\ 2 \end{pmatrix} + \left(\begin{pmatrix} -3 \\ -2 \end{pmatrix} + \begin{pmatrix} 1 \\ 2 \end{pmatrix}\right) =$$

-3

2

✓ Answer: -3

✓ Answer: 2

Submit

i Answers are displayed within the problem

Homework 1.3.2.6

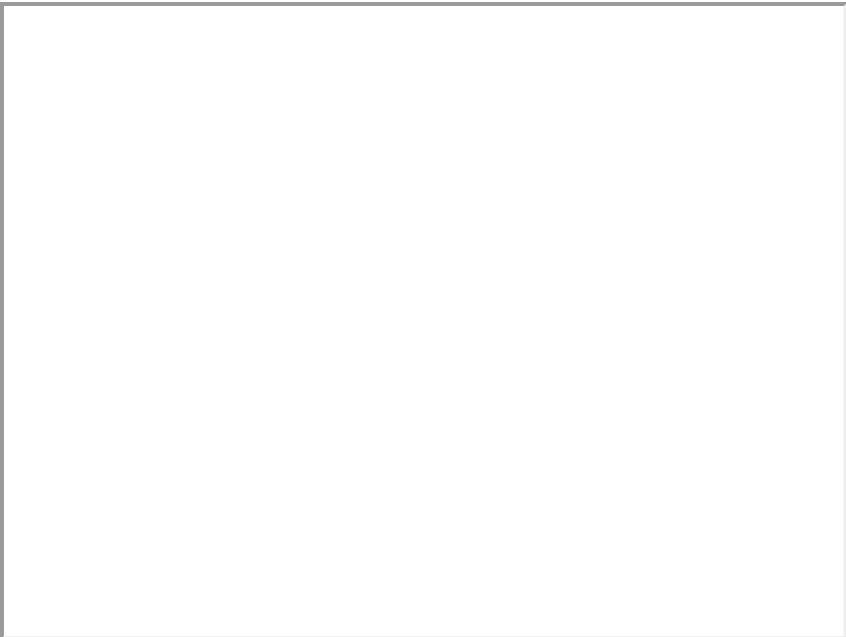
1/1 point (graded)

For $x, y, z \in \mathbb{R}^n$, $(x + y) + z = x + (y + z)$.

Always

✓ Answer: Always

Explanation
video



[Transcribed in final section of this week](#)

Calculator

Scanned solution from video

Submit

Answers are displayed within the problem

Homework 1.3.2.7

2/2 points (graded)

$$\begin{pmatrix} -1 \\ 2 \end{pmatrix} + \begin{pmatrix} 0 \\ 0 \end{pmatrix} =$$

-1

2

✓ Answer: -1

✓ Answer: 2

Submit

Answers are displayed within the problem

Homework 1.3.2.8

1/1 point (graded)

For $x \in \mathbb{R}^n$, $x + \mathbf{0} = x$

where $\mathbf{0}$ is the zero vector of appropriate size.

Always

✓ Answer: Always

Explanation

Transcribed in final section of this week

Submit

Answers are displayed within the problem

View the following video and find out how the "parallelogram method" for vector addition is useful in sports:

https://www.nsf.gov/news/mmg/mmg_disp.jsp?med_id=69233&from=

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