1.5.5 An Inner Product Routine (dot)

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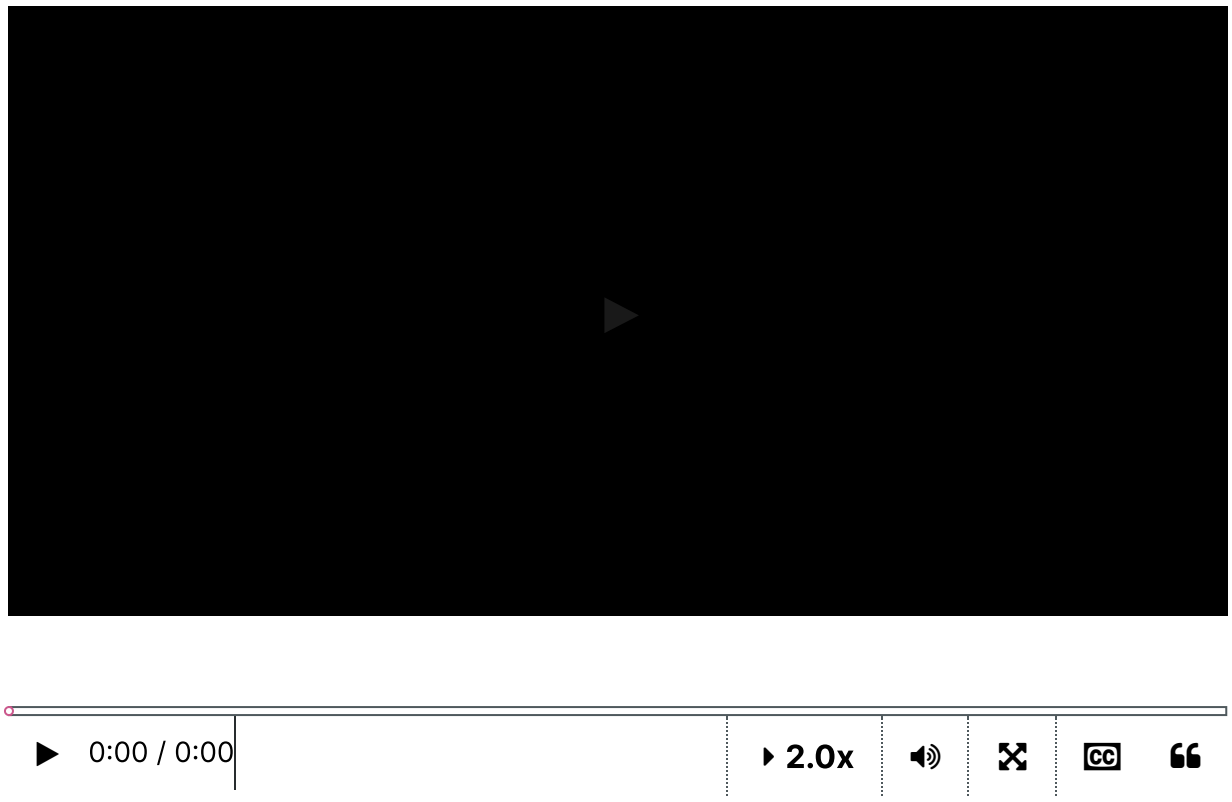
Week 1 due Oct 5, 2023 03:12 IST Completed

1.5.5 An Inner Product Routine (dot)

1.5.5.1 Part 1



Start of transcript. Skip to the end.

Dr. Robert van de Geijn: So moving right along,

let's try to write a function that takes the inner product of two vectors.

Now again, this is very similar to the copy routine

because it involves two vectors.

So what we'll do is we'll start with the copy routine.

Video
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Reading Assignment

0 points possible (ungraded)
Read Unit 1.5.5 of the notes. [LINK]

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1.5.5 Discussion

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? Unindented "end" ends the function and ignores everything afterwards? 2

? code
is the test case and codes are available for every routines 5

? Indexing
For this question, I first verify whether the row or column vectors are valid. However, after finding the vector length (any value ~= 1) of one of

Calculator

? Programming

Hi! Could you please explain why in the code should be write alpha = alpha + x(i,1) * y(i,1); In my understanding of what a simple dot product is... 4

Homework 1.5.5.1

1/1 point (graded)

Implement the function `laff_dot` that computes the dot product of vectors x and y. The function is defined as

```
function [ alpha ] = laff_dot( x, y )
```

where

- `x` and `y` must each be either an $n \times 1$ array (column vector) or a $1 \times n$ array (row vector);
- If `x` and/or `y` are not vectors or if the size of (row or column) vector `x` does not match the size of (row or column) vector `y`, the output should be `'FAILED'`.

Check your implementation with the script in `LAFF-2.0xM/Programming/Week01/test_dot.m`.

Done / Skip

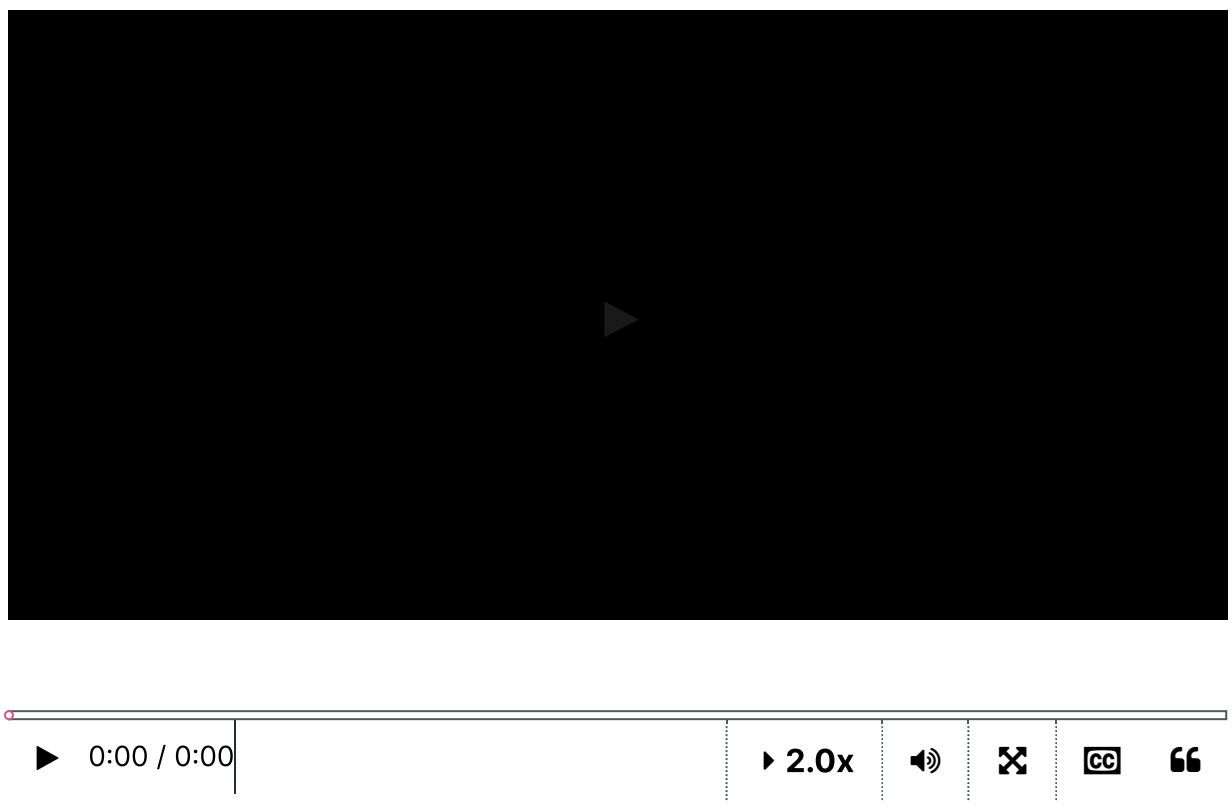
See the video below and the routine in the file `LAFF-2.0xM/Programming/laff/vecvec/laff_dot.m` .

Here is a solution: laff_dot.m .

Submit

Answers are displayed within the problem

1.5.5.1 Part 2 (Answer)



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Robert van de Geijn: OK, so we're back.

And let's see what we need to do.

Well, we are already checking whether x and y are row and/or column vectors,

so let's leave that alone.

But we do need to check that alpha is actually scalar.

But wait a minute, alpha is actually an output,

0:00 / 0:00 2.0x

Video

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