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CSCI-B 456

Assignment 1

2.25 b)

A function is linear if the following is satisfied:

Assume there are two sets,

2.25 d)

A function is linear if the following is satisfied:

Assume there are two sets,

2.26

A function is linear if the following is satisfied:

Assume there are two sets, and

2.37

The image would first be scaled to the appropriate size. Then it would be translated to the desired location, followed by a rotation of the specified angle. Applying to this resultant image would smooth the rough edges formed by the transformation, as uses a local average to smooth images.

2.38 c)

2.38 d)

The order of matrix multiplication is important when creating a transformation matrix. For example, assume you are given the following scale and translation matrices:

If the order was not important,

the order of multiplication is important

2.39 b)

Translation matrix:

Adjugate matrix = determinants of all matrices in

2.39 c)

Shearing matrix:

2.41 b)

Separable:

,

Symmetric: