**Exercise A1**

Find the determinants for the following 2x2 matrices

1. **Et billede, der indeholder Font/skrifttype, cirkel, symbol, nummer/tal

   Automatisk genereret beskrivelse**

 determinant for 2x2 matrices

**The determinant for the matrix is 10 meaning that the matrix has an inverse as the determinant isn’t 0**

1. **Et billede, der indeholder Font/skrifttype, ur, cirkel, nummer/tal

   Automatisk genereret beskrivelse**

 determinant for 2x2 matrices

**The determinant for the matrix is 17 meaning that the matrix has an inverse as the determinant isn’t 0**

1. **Et billede, der indeholder Font/skrifttype, cirkel, nummer/tal, symbol

   Automatisk genereret beskrivelse**

 determinant for 2x2 matrices

**The determinant for the matrix is -14 meaning that the matrix has an inverse as the determinant isn’t 0**

**Exercise A2**

Find the determinants for the following 3x3 matrices

1. **Et billede, der indeholder ur, Font/skrifttype, nummer/tal, skærmbillede

   Automatisk genereret beskrivelse**

Et billede, der indeholder tekst, Font/skrifttype, skærmbillede, håndskrift

Automatisk genereret beskrivelse determinant for 3x3 matrices

**The determinant for the matrix is -306 meaning that the matrix has an inverse as the determinant isn’t 0**

1. **Et billede, der indeholder ur, skærmbillede, Font/skrifttype, nummer/tal

   Automatisk genereret beskrivelse**

Et billede, der indeholder tekst, Font/skrifttype, skærmbillede, håndskrift

Automatisk genereret beskrivelse determinant for 3x3 matrices

**The determinant for the matrix is -330 meaning that the matrix has an inverse as the determinant isn’t 0**

1. **Et billede, der indeholder ur, Font/skrifttype, nummer/tal, cirkel

   Automatisk genereret beskrivelse**

Et billede, der indeholder tekst, Font/skrifttype, skærmbillede, håndskrift

Automatisk genereret beskrivelse determinant for 3x3 matrices

**The determinant for the matrix is -326 meaning that the matrix has an inverse as the determinant isn’t 0**

**Exercise B**

1. **Find a vector orthogonal to each of v1 and v2: Et billede, der indeholder Font/skrifttype, cirkel, symbol, design

   Automatisk genereret beskrivelse**

orthogonal vector (vector with the dot product of 0 with the given vector - )

**V1**

***Testing by checking if the dot-product with the orthogonal vector and v1 = 0***

 dot product

\_\_\_\_\_\_\_\_\_\_\_

**V2**

as

***Testing by checking if the dot-product with the orthogonal vector and v2 = 0***

 dot product

**The orthogonal vectors are found for both v1 & v2, and it is checked that they are the orthogonal vectors by checking if the dot product between the ortho vector and the given vector is 0**

**Exercise C**

Invert the following 2x2 matrices

1. **Et billede, der indeholder Font/skrifttype, ur, symbol, cirkel

   Automatisk genereret beskrivelse**

Et billede, der indeholder håndskrift, Font/skrifttype, linje/række, diagram

Automatisk genereret beskrivelse inverse for 2x2 matrix

 determinant for 2x2 matrices

**The inverse of the 2x2 matrix is**

1. **Et billede, der indeholder ur, Font/skrifttype, cirkel, nummer/tal

   Automatisk genereret beskrivelse**

Et billede, der indeholder håndskrift, Font/skrifttype, linje/række, diagram

Automatisk genereret beskrivelse inverse for 2x2 matrix

 determinant for 2x2 matrices

**The inverse of the 2x2 matrix is**

1. **Et billede, der indeholder Font/skrifttype, ur, cirkel, nummer/tal

   Automatisk genereret beskrivelse**

Et billede, der indeholder håndskrift, Font/skrifttype, linje/række, diagram

Automatisk genereret beskrivelse inverse for 2x2 matrix

 determinant for 2x2 matrices

**The inverse of the 2x2 matrix is**

* The rest of the exercises are in the markdown of the class