Assignment 4

1. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (x + 2y, 3x - y) \]

2. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (2x - y, x + 3y) \]

3. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (x - y, 2x + y) \]

4. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (x + y, 3x - y) \]

5. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (2x - y, x + 3y) \]

6. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (x - y, 2x + y) \]

7. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (x + y, 3x - y) \]

8. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (2x - y, x + 3y) \]

9. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

   \[ f(x, y) = (x - y, 2x + y) \]

10. Find the matrix of the linear transformation f : R^2 \to R^2 defined by the following rules:

    \[ f(x, y) = (x + y, 3x - y) \]