

Homework 1

1. Problem 1

a.) Fill out the table using the vector X from X.mat

dim(X1)	dim(X2)	k ₁	k ₂
970	1030	817	188

b.) Strophoid Function

$F(X_1(511))$	$F(X_2(511))$
1.459659638139902e-01	3.240932118522933e-01

```
function f = strophoids(x)
a = 0.5;
if x < 0.5
    f = x*sqrt( (a - x) / (a + x) );
end
if x > 0.5
    f = x*sqrt( (x - a) / (a + x) );
end
```

```
%(x - a) / (a + x)
%(x^2 - a^2) / (a^2 + 2*a*x + x^2)
```

c.) Plot Strophoids

