1. Вычислить значение градиента функции в точке x = 0:

f(x) = tg(x^2 - 2) + exp(sin(x))

grad (tan(x^2-2)+exp(sin(x)))

https://chart.googleapis.com/chart?cht=tx&chl=grad(z)%20=%20\frac%7b%20\partial%20z%7d%7b%20\partial%20x%7d\overline%7bi%7d%20%2B%20\frac%7b%20\partial%20z%7d%7b%20\partial%20y%7d\overline%7bj%7d

При х=0 grad =

2. Решить задачу многоклассокой классификации для нового измерения x = 2.5 с использованием модели GMM:

C1 = {1,3,5,2,1,7,8,5,1,2,3,6,5,2}

C2 = {11, 10, 0}

C3 = {0,5,3,5,1,7,8,5,4,3,5,2,1}

M0 = 3.642857142857143

Signma0 = 5.08673469387755

GMM(x\_new | mu0, sigma0^2) = 0.00018459397502524523

M1 = 7.0

Signma1 = 24.666666666666668

GMM(x\_new | mu1, sigma1^2) = 0.0483919552832994

M2 = 3.769230769230769

Signma2 = 5.254437869822484

GMM(x\_new | mu2, sigma2^2) = 0.00027603467771403347

More likely 0-1: 0 set: GMM0 > GMM1

More likely 1-2: 2 set

More likely 0-2: 0 set

- More likely set 1

- More likely set 3

- More likely set 1

**More likely set 1**