

## **Random Variable with Normal Distribution Tutorial Exercise**

Let  $X$  be a random variable having probability density function  $f_X(x)$ . Find the probability density function of the random variable  $Y = a \cdot X^2$ . Solve for  $X$  with normal distribution, mean value  $m = 0$  and variance  $\sigma = 1$ .  $a$  is set to  $a = 1$ .