**1) Let X have the p.d.f. f(x) = 4x^3 , 0<x<1**

**Find the p.d.f. of Y = X^2**

**2) Let x have a gamma distribution with α=3 and θ = 2**

**determine the p.d.f. of Y=X^2.**

**3) The P.d.f. of X is f(x) = θ x^(θ-1), 0<x<1 , 0<θ<∞. Let Y=-2θ lnX. How is Y distributed?**