

Math 262

Section 3.7

Day 26

1. Let X have density $f_X(x) = \frac{x}{2}$ for $0 \leq x \leq 2$, and let $Y = X^2$. What is the density of Y ?

2. Let X have density $f_X(x) = 2x$ for $0 \leq x \leq 1$, and let $Y = e^{-X}$. What is the density of Y ?

3. Let X have density $f_X(x) = 2x$ for $0 \leq x \leq 1$, and let $Y = 2 - X^2$. What is the density of Y ?

4. Let $X \sim N(0, 1)$ and $Y = X^2$. What is the distribution of Y ?