Department of Mathematics
College of William & Mary

MATH 451/551

Chapter 3. Random Variables

3.4 Expected Values

GuanNan Wang
gwang01@wm.edu

Example 5

Example 5

Find the population mean of the random variable X with probability density function

$$f(x) = \frac{x}{2}, \qquad 0 < x < 2.$$

Example 6

For the random variable X with probability density function

$$f(x) = \begin{cases} 1 - x & 0 < x < 1 \\ 1/4 & 5 < x < 7 \end{cases}$$

calculate $\mu = E(X)$.

Example 7

Find $E(X)$ for the random variable X with proobability density function

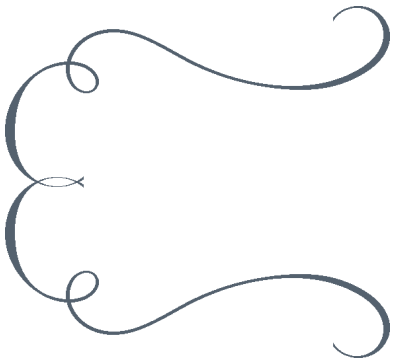
$$f(x) = \frac{1}{x^2}, \quad x > 1.$$

Example 8

Find $E(X)$ for the random variable X with probability density function

$$f(x) = \frac{1}{\pi(1+x^2)}, \quad -\infty < x < \infty.$$

Thank You



THANK YOU!