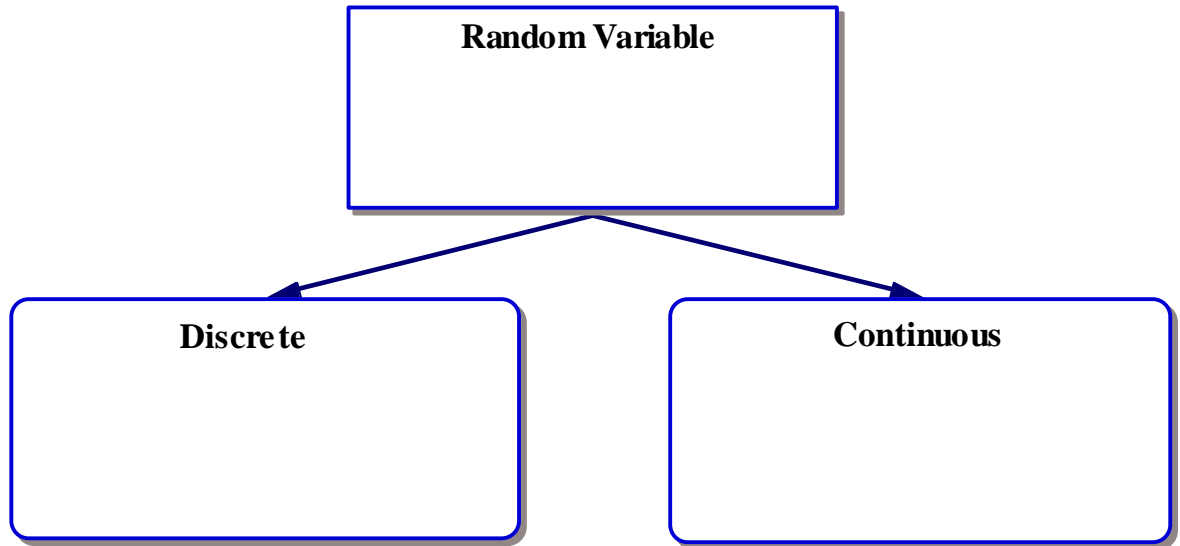


Notes 4.1 Probability Distribution Part A

I. Random Variables



Example 1:

Decide whether the random variable, x , is discrete or continuous. Explain your reasoning.

- a. x represents the number of stocks in the Dow Jones Industrial Average that have share prices increases on a given day
- b. x represents the volume of bottled water in a 32-ounce container
- c. x represents the length of time it takes to complete a test
- d. x represents the number of home runs hit during a Braves game

II. Discrete Probability Distributions –

There are two conditions:

- 1.
- 2.

Because probabilities represent relative frequencies, a discrete probability distribution can be graphed with a _____.

Notes 4.1 Probability Distribution Part A

Example 2:

A company tracks the number of sales new employees make each day during a 100-day probationary period. The results for one new employee are shown. Construct and graph a probability distribution.

Sales per Day, x	Number of Days, f
0	16
1	19
2	15
3	21
4	9
5	10
6	8
7	2

x	0	1	2	3	4	5	6
$f(x)$							



Example 3:

Determine whether each distribution is a probability distribution.

a.

x	1	2	3	4
$p(x)$	0.09	0.36	0.49	0.06

b.

x	5	6	7	8
$p(x)$	$\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{3}{16}$

c.

x	9	10	11	12
$p(x)$	0.28	0.21	0.43	0.15

d.

x	1	2	3	4
$p(x)$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{5}{4}$	-1

Assignment: New textbook: pgs 201 – 203/ 9 – 10, 11 – 12, 13 – 16, 17 – 20, 23 – 24, 25 – 28

Old textbook: pgs 159 – 160/ 7 – 8, 9 – 12, 15 – 16