FREQUENCY TABLES, HISTOGRAMS, STEM-AND-LEAF [PIRNOT 14.1]

EX 14.1.1: A random sample of 32 college students is selected. Each student is asked how much time he or she spent on homework during the previous week. The following times (in hours) are obtained:

21, 16, 18, 24, 18, 18, 17, 16, 15, 21, 17, 21, 19, 17, 19, 18, 16, 15, 20, 15, 15, 17, 24, 17, 19, 16, 16, 19, 20, 17, 18, 25

(a) Construct a frequency & relative frequency table for the data:

HOURS OF STUDY	FREQUENCY	RELATIVE FREQUENCY
$15 - 16$		
$17 - 18$		
$19 - 20$		
$21 - 22$		
$23 - 24$		
$25 - 26$		
TOTAL:		

(b) Construct a frequency histogram for the data using the table in part (a).

(c) Construct a relative frequency histogram for the data using the table in part (a).

76, 59, 43, 56, 67, 81, 66, 45, 84, 71, 76, 94, 88, 57, 82, 63, 93, 82, 76, 68, 84, 54, 64, 47, 94, 94, 87, 66, 73, 75, 74, 78, 59, 67, 79

(a) Construct a stem-and-leaf display for the data

(b) What are the greatest frequency of exam scores?

(c) What are the smallest frequency of exam scores?

EX 14.1.3: The following back-to-back stem-and-leaf displays show the ages of actors & actresses for 30 Oscar winners:

ACTORS	STEMS	ACTRESSES
	2	1 4 6 6 6 7
9 8 7 5 3 2 2 1	3	0 0 1 1 3 3 4 4 4 5 5 7 7 7 8
8 8 7 7 6 5 4 3 3 2 2 1 0 0	4	1 1 1 2 9
6 6 5 1	5	
2 1 0	6	0 1 1
6	7	4
	8	0

(a) List the ages of actors with stem 6

(b) List the ages of actresses with stem 6

(c) What is the age of the youngest actor to win an Oscar?

(d) What is the age of the oldest actress to win an Oscar?

(e) What is the age difference between the oldest and youngest actor to win an Oscar?

(f) What is the age difference between the oldest and youngest actress to win an Oscar?

(g) In what age group did the most actors win an Oscar?

(h) What age group has the greatest frequency of actresses winning an Oscar?