

Basic Alg 1.7

Construct and interpret line graphs,



Construct and interpret histograms, and stem-and-leaf plots

line graph *trend, prediction*

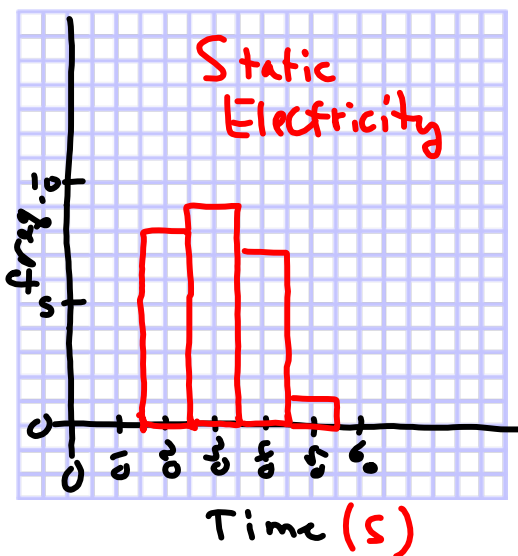
histogram *Categories*

cumulative frequency histogram

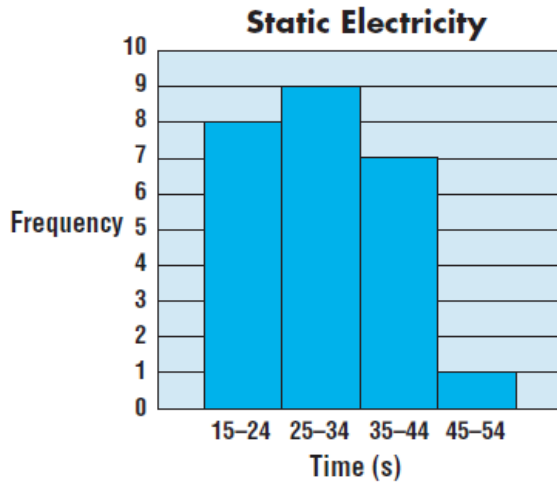
stem and leaf plot

The frequency table is from Example 2 in Lesson 1–6. It shows the various time intervals that “charged” balloons remained stuck to the wall. Construct a histogram of the data.

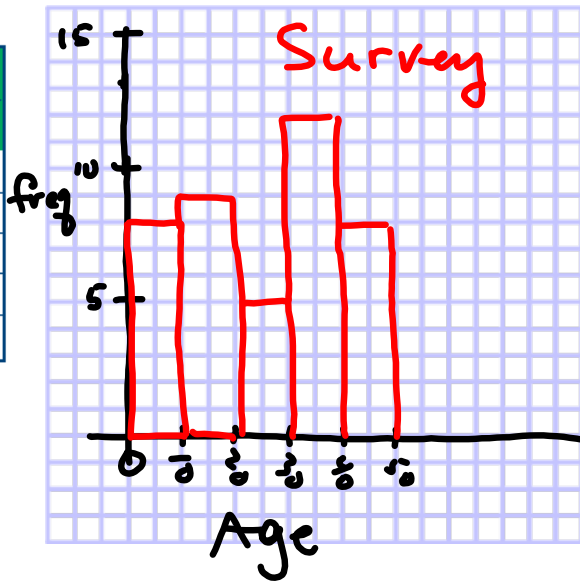
Static Electricity		
Time (s)	Tally	Frequency
15–24	III	8
25–34	IIII	9
35–44	II	7
45–54	I	1



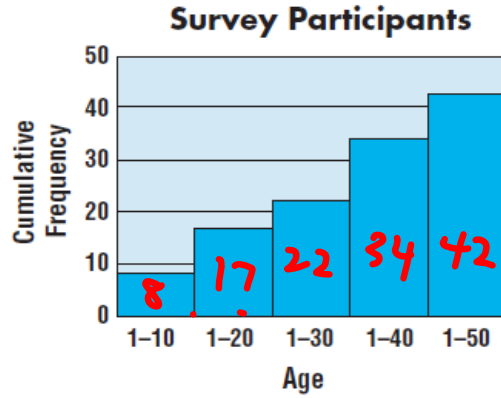
- Equal intervals on each axis
- All bars same width and touch each other



Survey		
X		✓
Age	Tally	Frequency
1-10	III	8
11-20	IIII	9
21-30		5
31-40	IIII II	12
41-50	III	8



Survey		
Age	Frequency	Cumulative Frequency
1-10	8	8
11-20	9	17
21-30	5	22
31-40	12	34
41-50	8	42



The greatest common place value for each data item is used to form the *stem*.

Stem	Leaf
1	1 6
2	1 3 9
3	
4	5 5

The *leaves* are formed by the next greatest place value.

$2 | 3 = 23$

A key is always included. This shows how the digits are related.

11, 16, 21, 23, 29  
45, 45

↓

Stem	Leaf
10	2 8
11	4 5
12	5 7
13	1 9

$11 | 5 = 115$

102, 108, 114, 115,  
125, 127, 131, 139

4 The table shows the class results on a 50-question test. Make a stem-and-leaf plot of the grades.

Class Scores					
<u>29</u>	<u>37</u>	<u>48</u>	<u>40</u>	<u>17</u>	<u>34</u>
<u>28</u>	<u>43</u>	<u>37</u>	<u>35</u>	<u>49</u>	<u>29</u>
<u>13</u>	<u>29</u>	<u>42</u>	<u>45</u>	<u>37</u>	<u>46</u>

Class Scores

1	3, 7
2	8, 9, 9, 9
3	4, 5, 7, 7, 7
4	0, 2, 3, 5, 6, 8, 9

$3 | 5 = 35$

Stem	Leaf
1	7 3
2	9 8 9 9
3	7 4 7 5 7
4	8 0 3 9 2 5 6

**Your Turn**

c. Make a stem-and-leaf plot of the quiz grades below.  
 54, 55, 60, 42, 41, 75, 50, 68, 62, 54, 70, 50



WB 1.7

$$4|5 = 45$$

