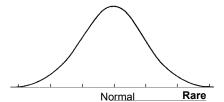Lesson 13: Normal? Find out with a normal probability plot!
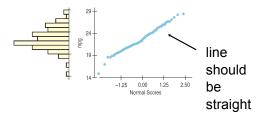
Normal   **Rare**

When is a normal model appropriate?

· When you actually have your own data, you must *check* to see whether a Normal model is reasonable.

· Looking at a histogram of the data is a good way to check that the underlying distribution is roughly unimodal and symmetric.
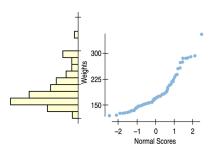
Normal Probability Plot

A more specialized graphical display that can help you decide whether a Normal model is appropriate is the Normal probability plot.
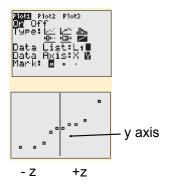
line should be straight

A skewed distribution might have a histogram and Normal probability plot like this:

Plot1 Plot2 Plot3
On Off
Type: ⌐ ⌐ dₕ
      ⌐ ⌐ ☰
Data List:L₁
Data Axis:X
Mark: ☐ + ·

— y axis

- z   +z
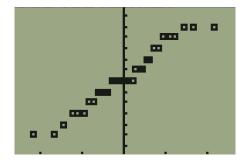
Are you normal?

your exam scores

14 14 17 14 13 14 19
18 18 9 14 15 11 14
11 15 18 13 11 9 14
16 10 13 16 15 19 13
19 12 12 17

1-Var Stats
x̄=14.28125
Σx=457
Σx²=6781
Sx=2.865077548
σx=2.819955396
↓n=32

1-Var Stats
↑n=32
minX=9
Q₁=12.5
Med=14
Q₃=16.5
maxX=19

Data for: MSS21X-01   Select Class(es) ▾

Grade Distributions for Exam-I

Grade Distribution Overview

Mean	Median	Mode	All Stud...	Ungraded	Pass	Fail
71	70	70	32	0	24	8