

# PROB STAT HONORS Name \_\_\_\_\_

## 4.4 – UNUSUAL POINTS

$x$	40	50	60	70	80	90	100
$y$	58	34	32	30	28	27	22

1. The data above were taken from the paper “Ancient Maya Drained Field Agriculture: Its Possible Application Today in the New River Floodplain, Belize, C.A.” (*Agricultural Ecosystems and Environment* [1984]: 67–84). The variables are  $x$  (soil depth in centimeters) and  $y$  (percentage of montmorillonite in the soil). Identify any unusual points in the scatterplot of these data.

$x$	92	92	96	100	102	102	106	106	121	143
$y$	1.7	2.3	1.9	2.0	1.5	1.7	1.6	1.8	1.0	0.3

2. The paper “Crop Improvement for Tropical and Subtropical Australia: Designing Plants for Difficult Climates” (*Field Crops Research* [1991]: 113–139) gave the data above on  $x$  (crop duration in days) for soybeans and  $y$  (crop yield in tons per hectare). Identify any unusual points in the scatterplot of these data.

<i>Animal</i>	Gestation, $x$	Avg. Life Expectancy, $y$
<i>Donkey</i>	365	19
<i>Cat</i>	63	11
<i>Cow</i>	280	10.5
<i>Dog</i>	62	11
<i>Elephant</i>	624	35
<i>Fox</i>	57	9
<i>Goat</i>	151	12
<i>Guinea Pig</i>	88	3
<i>Hamster</i>	16	2
<i>Hippo</i>	240	30
<i>Horse</i>	336	22.5
<i>Lion</i>	108	10
<i>Human</i>	278	81
<i>Pig</i>	115	10
<i>Rabbit</i>	31	7
<i>Sheep</i>	151	12
<i>Squirrel</i>	44	8.5
<i>Wolf</i>	61	11

3. The data above give the gestational period (days) and average life expectancy (years) for a selection of life forms. Identify any unusual points in the scatterplot of these data.