Notes Page

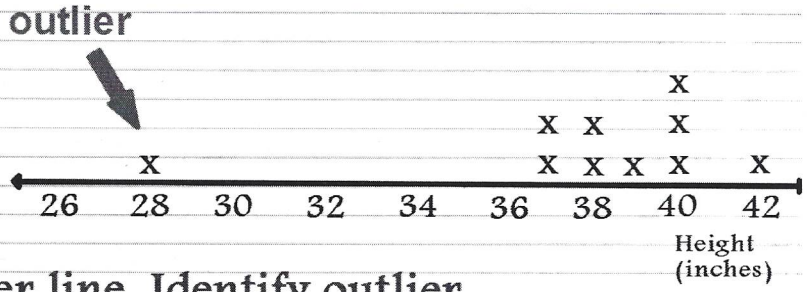
Vocab

word	definition
outlier	a data value that is much greater or much less than the other values; Outliers can affect the mean if they are included in the data set.

Complete number 2 in your composition book.

2) The table shows the heights of several Shetland ponies.

Shetland Pony (in.)				
40	37	39	40	42
38	38	37	28	40



a) Graph the heights on a number line. Identify outlier.

b) Find the mean with the outlier:

$28 + 37 + 37 + 38 + 38 + 39 + 40 + 40 + 40 + 42 = 379$ $\frac{379}{10} = 37.9$ inches

Find the mean without the outlier:

$37 + 37 + 38 + 38 + 39 + 40 + 40 + 40 + 42 = 351$ $\frac{351}{9} = 39$ inches

Remember to change how many you're dividing by.

c) Describe how the outlier affects the mean.

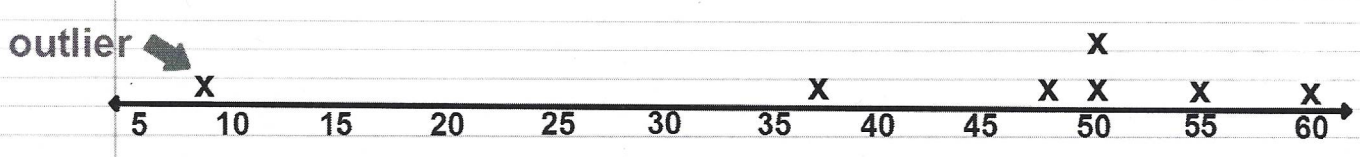
With the outlier, the mean is less than all but three of the heights. Without the outlier, the mean better represents the heights.

Complete numbers 3 and 4 on your notes page.

3) Below are the weights (in pounds) of dogs at a kennel.

48, 50, 55, 60, 8, 37, 50

a) Graph the weights on a number line. Identify the outlier.



b) Find the mean with the outlier.

$8 + 37 + 48 + 50 + 50 + 55 + 60 = 308$ $\quad \frac{308}{7} = 44$

Find the mean without the outlier.

$37 + 48 + 50 + 50 + 55 + 60 = 300$ $\quad \frac{300}{6} = 50$

c) Describe how the outlier affects the mean.

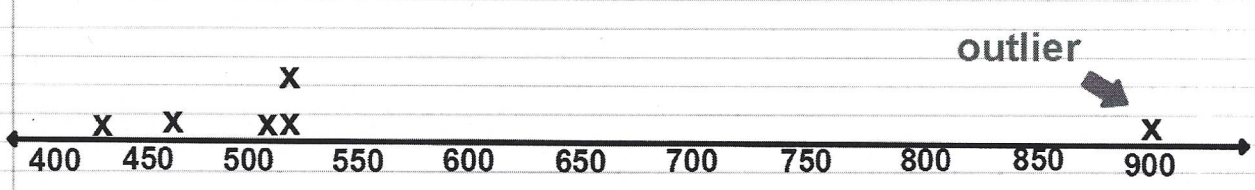
With the outlier, the mean is lower than 5 out of the 7 data.
Without the outlier, the mean is in the middle of the data.

Complete numbers 3 and 4 on your notes page.

4) Below are the prices for flights from Miami to San Juan.

$456, $512, $516, $900, $436, $516

a) Graph the prices on a number line. Identify the outlier.



b) Find the mean with the outlier.

$436 + 456 + 512 + 516 + 516 + 900 = 3336$ $\quad \frac{3336}{6} = \$556$

Find the mean without the outlier.

$436 + 456 + 512 + 516 + 516 = 2436$ $\quad \frac{2436}{5} = \$487.20$

c) Describe how the outlier affects the mean.

With the outlier, the mean is higher than 5 out of the 6 data. Without the outlier, the mean is closer to the middle of the data.