Basic Statistics Practice #1

1.   The number of cats owned by students in a class is listed below:

   0, 2, 0, 0, 1, 1, 0, 0, 4, 2, 0, 1, 0, 0, 1, 3, 1, 1, 1, 0, 0, 2, 0, 1, 0, 2, 3, 0

   a) Complete a frequency table of this data, including labelling it properly, then graph it:

   b)   What is the median number of cats owned?   ....

   c)   What is the mean number of cats owned?   ....

   d)   What is the mode number of cats owned?   ....

   e)   Describe the trend in the data/graph?   ....

   ....

2.   The distance from school to the homes of the students is recorded, to the nearest km:

   0, 2, 1, 5, 1, 19, 0, 4, 4, 15, 0, 1, 1, 3, 18, 3, 18, 3, 4, 7, 20, 2, 18, 12, 0, 2, 3, 1
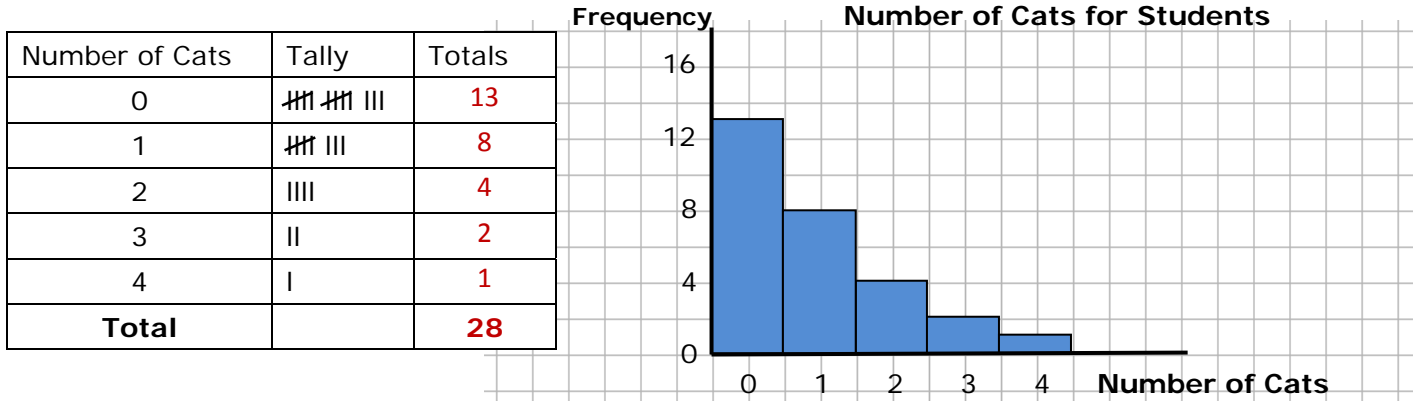
   a)   Complete a dot plot of this data.

   b)   What is the median distance from school?   ....

   c)   Discuss any features of the graph   ....

   ....

   ....

Answers: Basic Statistics Practice #1

1. The number of cats owned by students in a class is listed below:

    0, 2, 0, 0, 1, 1, 0, 0, 4, 2, 0, 1, 0, 0, 1, 3, 1, 1, 1, 0, 0, 2, 0, 1, 0, 2, 3, 0

    a) Complete a frequency table of this data, including labelling it properly, then graph it:

Number of Cats	Tally	Totals
0	ⵛ卌 卌 III	13
1	卌 III	8
2	IIII	4
3	II	2
4	I	1
Total		**28**

Frequency — Number of Cats for Students — Number of Cats

The graph should be a histogram (no gaps between bars, as above) or bar graph – it can also go sideways. Not a line graph as it is not some value against time.

b) What is the median cats owned? **1** (put in order, middle is 14th/15th out of 28)

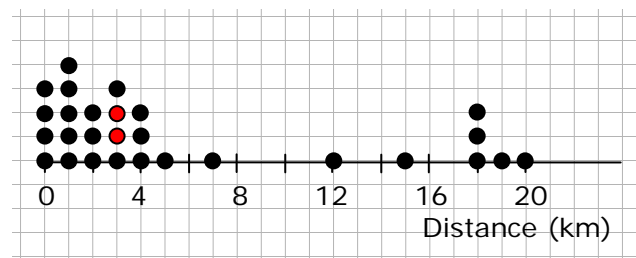c) What is the mean cats owned?   **0.93** (26 cats owned ÷ 28 people)

d) What is the mode cats owned?   **0** (most common value)

e) Describe the trend in the data/graph?   The number of people drops off steadily with, the number of cats – the greater the number of cats, the less people have that many.

2. The distance from school to the homes of the students is recorded, to the nearest km:

    0, 2, 1, 5, 1, 19, 0, 4, 4, 15, 0, 1, 1, 3, 18, 3, 18, 3, 4, 7, 20, 2, 18, 12, 0, 2, 3, 1

    a) Complete a dot plot of this data.

Distance (km)

b) What is the median distance?   **3 km** (put in order, middle are 14th/15th shown red)

c) Discuss any features of the graph   Most people live within 4 km of the school, but there are five in a clump at 18–20 km away (presumably there is another town that distance from the school). There are not many from 5 to 17 km, so maybe farms etc.