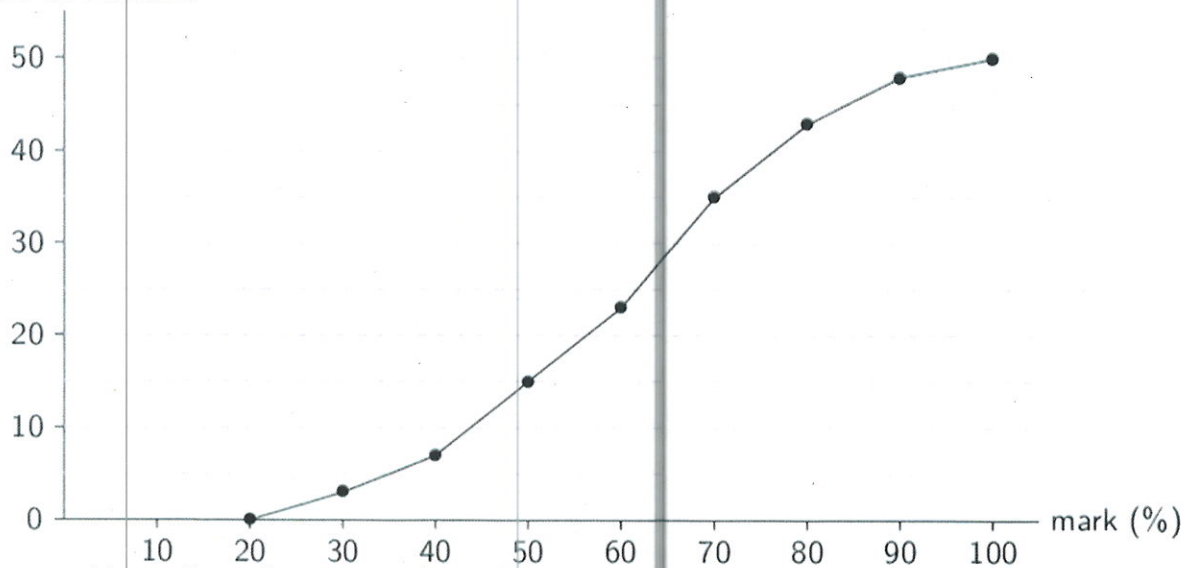
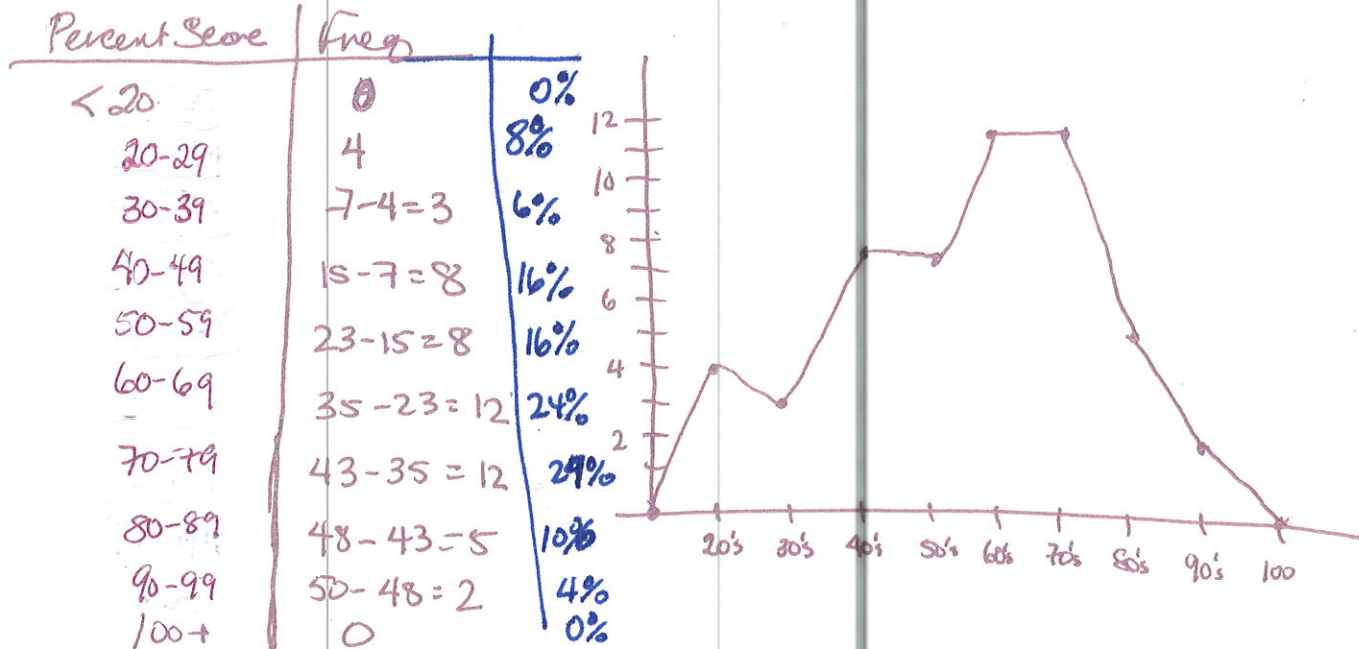


Instructions: Show all work. Use exact answers unless specifically asked to round. Explain thoroughly using complete sentences.

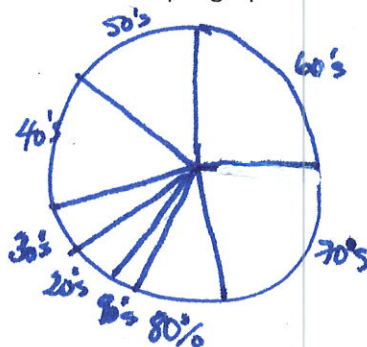
1. An Ogive graph is displayed below for 50 students.
number of students



- a. Convert this graph to a frequency polygon. [Hint: it may help to construct a (cumulative) frequency table first.]



- b. Use the same data to construct a pie graph.



2. Use the data shown below to answer the questions that follow.

49	54	58	59	62	62	63	64	64	67
69	70	70	71	71	72	75	76	81	82

a. Construct a stem-and-leaf plot from the data. (Be sure to include a key.)

```

4 | 9
5 | 4 8 9
6 | 2 2 3 4 4 7 9
7 | 0 0 1 1 2 5 6
8 | 1 2
    
```

b. Find the mean, median and mode.

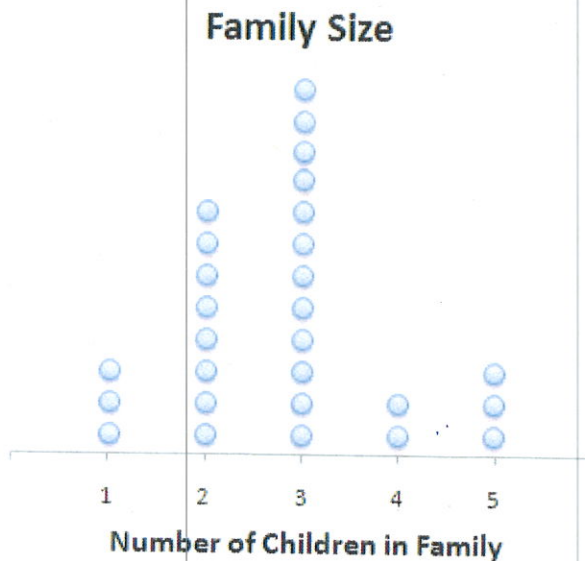
Median = 68

mean $\bar{x} = 66.95$ mode : no mode (4 values are repeated twice)

c. Use technology to find the standard deviation.

$s = 8.48$

3. A dot plot is shown below. Use it to answer the questions that follow.



a. Describe the shape of the distribution.

roughly symmetric?

b. What is the modal class?

3

c. Why is a dot plot a good graph type for family size data, but not great for the data on test scores in the previous question?

there are a limited # of possible values & they are all discrete.

4. If we want to use pictograms to graph data, what do we scale instead of height?

Scale the area of the shape.

5. The mean starting salary for a particular job is \$25,400, with a standard deviation of \$1540. What z-score is associated with a starting salary of \$29,000?

$$\frac{29,000 - 25,400}{1540} = 2.34$$