1. The number of a specific type of bird spotted at a nature reserve over a period of time is shown below.

| 21 | 19 | 28 | 30 | 38 | 40 | 41 | 37 |
|----|----|----|----|----|----|----|----|
| 32 | 33 | 22 | 14 | 20 | 17 | 12 | 8 |

Complete the frequency table for these results.

| Birds | Tally | Frequency |
|-------|-------|-----------|
| 0-9 | | |
| | | |
| | | |
| | | |
| | | |
| | | Total= |

2. The goals scored by teams in a top flight football league season are shown below.

| 42 | 87 | 59 | 52 | 77 | 70 | 58 | 81 | 47 | 72 |
|----|----|----|----|----|----|----|----|----|----|
| 37 | 66 | 72 | 58 | 42 | 62 | 36 | 48 | 43 | 50 |

Complete the frequency table for these results.

| Goals | Tally | Frequency |
|-------|-------|-----------|
| 30-39 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | Total= |

3. A sample of pupils were given a French vocabulary test and their results recorded.

   The results are shown below.

   | 6 | 3 | 7 | 9 | 5 |
   |---|---|---|---|---|
   | 4 | 5 | 7 | 8 | 6 |

(a) Calculate the mean test score.

(b) Calculate the range.

Each pupil was then given time to revise before sitting a similar vocabulary test.

In the second test, the mean was 8 and the range was 4.

(c) Write two comments comparing the results in the first test compared to the results in the second test.

4. A short survey recorded the ages of the first 8 people to enter a library on a Monday morning at 9am.

   The results, in years, are shown below.

   | 25 | 58 | 78 | 50 |
   |----|----|----|----|
   | 57 | 64 | 40 | 4  |

(a) Calculate the mean age of visitors.

(b) Calculate the range of ages.

A second survey was taken of the first 8 people to enter the same library at 8pm on the same day.

In the second survey, the mean was 36 and the range was 20.

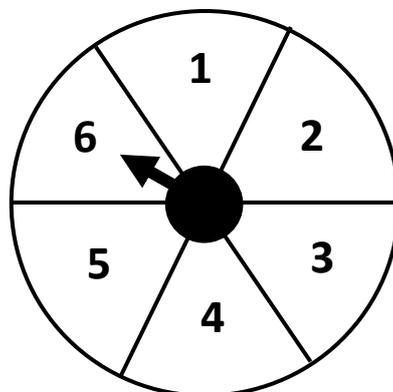(c) Write two comments comparing the results in the first survey compared to the results in the second survey.

Note: Probability - <u>Number of Favourable Outcome</u>
Number of Possible Outcomes

5. A spinner is spun.
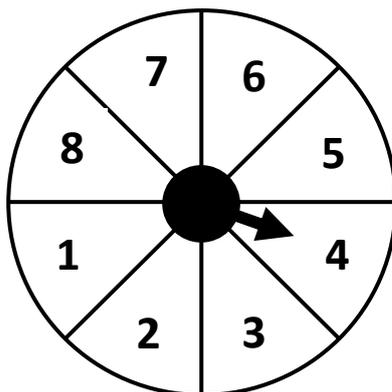
What is the probability that the arrows stops on a number greater than 5?
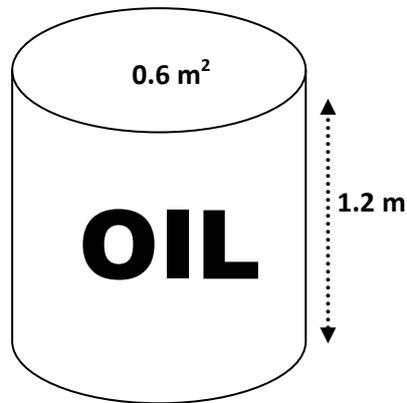
6. A spinner is spun.

What is the probability that the arrow stops on a number less than 4.

Note: Volume = Cross Sectional Area x Height

7. An oil barrel is in the shape of a cylinder.

It has a base of area 0.6 m$^2$ and a height of 1.2 m.

Calculate the volume of the barrel.

0.6 m$^2$

OIL

1.2 m

Calculate the volumes below:

13)
A=16cm$^2$

7cm

14)
A=24cm$^2$

4cm

15)
A=5m$^2$

2m

16)
A= 3·6m$^2$

7·3m

17)
A= 5·1m$^2$

2·6m

18)
A= 11·2m$^2$

3·7m