Mathematics Gr.8 Test 7

Statistics and probability

60 minutes **50 marks**

Question 1: [17]

The number of learners per school in a certain district is summarised as follow:

378	502	866	450	355	465
556	880	519	684	658	458

1.1 Is this data discrete or continuous? (1)

1.2 Draw a stem-and-leaf plot of the mentioned data above, and also arrange the data. (4)

1.3 Determine the mode. (1)

1.4 Determine the median. (2)

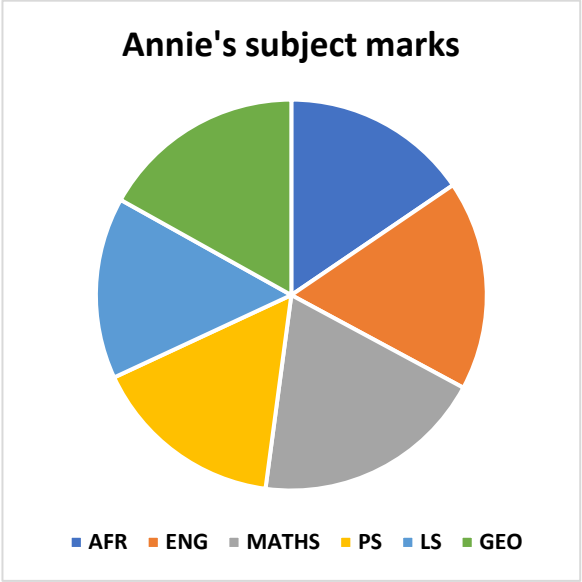
1.5 Determine the average number of learners per school in this district. Round off to the nearest integer. (4)

1.6 Compare your answers in 1.3, 1.4 and 1.5. Which of the three measures of central tendency would be the best to use? Motivate your answer. (2)

1.7 Calculate the percentage of outliers present here. Round off correctly to one decimal. (3)

Question 2: [13]

The pie chart shows the composition of all Annie's Subject marks for the mid-year examination. The total of all Annie's subjects is 426.



Answer the following:

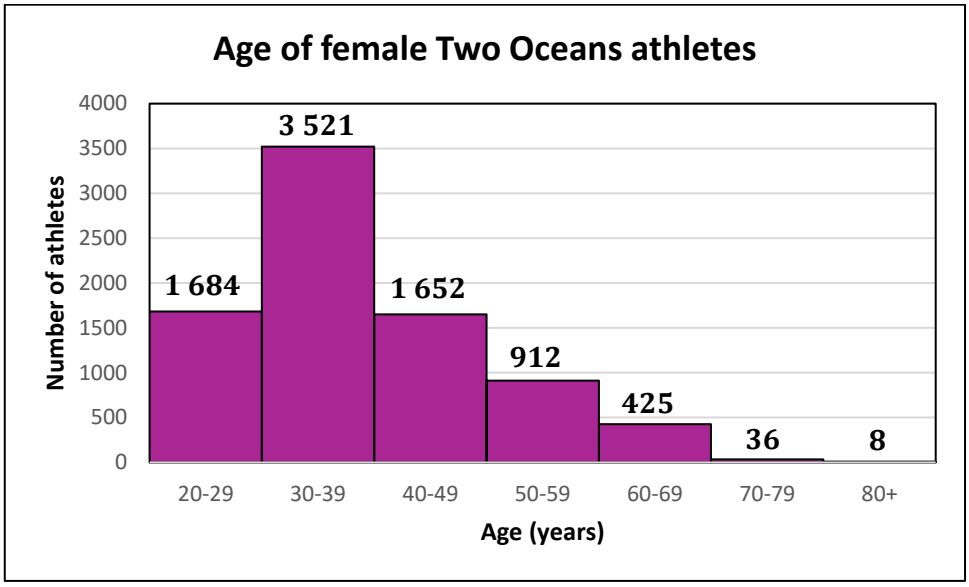
2.1 Calculate her percentage for each subject. (6)
Round off to the nearest integer.

2.2 Calculate the ratio (in simplest form) between Annie's subject with the lowest percentage and Annie's subject with the highest percentage. (3)

2.3 Represent the data as a line graph. (4)

Question 3: [8]

The graph shows the number of female athletes who participated in the Two Oceans Half Marathon on 12 April 2026.



Answer the following:

3.1 What type of graph is represented here? (1)

3.2 In which age group did the most athletes participate? (1)

3.3 How many female athletes participated in total in the Two Oceans Half Marathon in 2026? (2)

3.4 According to the Two Oceans organisers 10% more female athletes participated in the half-marathon in 2026 than in 2025. Calculate the number of female athletes who participated in the half marathon in 2025. Round off to the nearest integer. (3)

3.5 How would you rephrase the title of the graph to make it more descriptive? (1)

Question 4: [6]

Three coins are tossed.

What is the probability that two coins will land on heads and the third coin will land on tails?

(Use a tree diagram.)

Question 5: [6]

A fruit basket is being packed with the following fruit:

8 bananas, 6 oranges, 4 apples and 2 peaches.

You can choose one fruit from the basket. What is the probability that you chose: (Express you answer as a decimal fraction.)

5.1 an orange (2)

5.2 not an orange or an apple (2)

5.3 a pear (2)