

MATHEMATICS YEAR 5

UNIT 8 : DATA HANDLING

8.3 Problem solving

8.3.1 Solve problems involving data handling in daily situation.

WATCH THE VIDEO BELOW. THEN, ANSWER THE QUESTIONS

QUESTION 1

The table shows Syira's savings in 10 days.

Savings	RM0.50	RM1	RM1.50
Number of days	2	5	3

Find the range, mode, median, and mean.

Range

- Step 1:
- A RM 1.50 – RM 1.00
 - B RM 1.00 – RM 0.50
 - C RM 1.50 – RM 0.50

- Answer :
- A RM 0.50
 - B RM 1.00
 - C RM 1.50

Mode

- Answer :
- A RM 0.50
 - B RM 1.00
 - C RM 1.50

Median

- Answer :
- A RM 0.50
 - B RM 1.00
 - C RM 1.50

Mean

- Step 1 :
- A $\frac{(2 \times \text{RM } 0.50) + (5 \times \text{RM } 1.00) + (3 \times \text{RM } 1.50)}{10}$
 - B $\frac{(1 \times \text{RM } 0.50) + (3 \times \text{RM } 1.00) + (5 \times \text{RM } 1.50)}{10}$
 - C $\frac{(2 \times \text{RM } 0.50) + (5 \times \text{RM } 1.00) + (3 \times \text{RM } 1.50)}{3}$

- Answer :
- A RM 0.55
 - B RM 1.05
 - C RM 1.50

QUESTION 2

Ben collected data of his friends' mass. He presented the data as shown in the pictograph. Determine the range, mode, median, and mean of his friends' mass.

Mass of a Group of Pupils

28 kg	    
30 kg	  
32 kg	 

 represents 1 pupil

Range

- Step 1:
- A 30 kg – 28 kg
 - B 32 kg – 28 kg
 - C 32 kg – 30 kg

- Answer :
- A 2 kg
 - B 3 kg
 - C 4 kg

Mode

- Answer :
- A 28 kg
 - B 30 kg
 - C 32 kg

Median

- Answer :
- A 29 kg
 - B 30 kg
 - C 32 kg

Mean

Step 1 :

A $\frac{(2 \times 28 \text{ kg}) + (5 \times 30 \text{ kg}) + (3 \times 32 \text{ kg})}{10}$

B $\frac{(5 \times 28 \text{ kg}) + (3 \times 30 \text{ kg}) + (2 \times 32 \text{ kg})}{10}$

C $\frac{(5 \times 28 \text{ kg}) + (3 \times 30 \text{ kg}) + (2 \times 32 \text{ kg})}{3}$

Answer :

A 29 kg

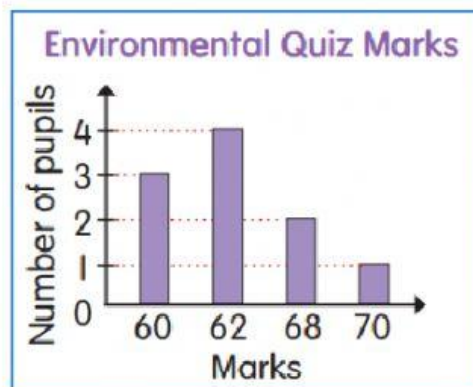
B 29.4 kg

C 30 kg

QUESTION 3

The bar chart indicates the marks of Mr Shanker's pupils for an Environmental Quiz.

- i What is the range of their marks?
- ii Is the median of the marks for the quiz equal to 62? Prove it.
- iii Calculate the mean of the marks for the quiz.



i) Range

Answer :

A 10 kg

B 8 kg

C 2 kg

ii) Median

Step 1:

A 60 kg, 60 kg, 60 kg, 62 kg, 62 kg, 62 kg, 62 kg, 68 kg, 68 kg, 70 kg

B 62 kg, 62 kg, 60 kg, 60 kg, 60 kg, 62 kg, 62 kg, 68 kg, 68 kg, 70 kg

C 68 kg, 68 kg, 60 kg, 60 kg, 60 kg, 60 kg, 62 kg, 68 kg, 68 kg, 70 kg

Answer : Yes No

iii) Mean

Step 1:

$$A \quad \frac{(2 \times 60 \text{ kg}) + (3 \times 62 \text{ kg}) + (2 \times 68 \text{ kg}) + (3 \times 70 \text{ kg})}{10}$$

$$B \quad \frac{(3 \times 60 \text{ kg}) + (4 \times 62 \text{ kg}) + (2 \times 68 \text{ kg}) + (1 \times 70 \text{ kg})}{3}$$

$$C \quad \frac{(3 \times 60 \text{ kg}) + (4 \times 62 \text{ kg}) + (2 \times 68 \text{ kg}) + (1 \times 70 \text{ kg})}{10}$$

Answer : A 62 kg
 B 63.4 kg
 C 70 kg

QUESTION 4

The pie chart shows the duration of studying, in hours, for 10 pupils in a week.

- i Determine the mode, median, and mean.
- ii State the ratio of the number of pupils who study for 7 hours to the total number of pupils.

Total Number of Hours of Studying in a Week



Step 1

Find the number of pupils for each hour.

Number of Hours	1 hour	5 hours	6 hours	7 hours
Number of pupils				

Mode

- Answer :
- A 5 hours
 - B 6 hours
 - C 7 hours

Median

- Answer :
- A 5 hours
 - B 6 hours
 - C 7 hours

Mean

- Answer :
- A 5.6 hours
 - B 6.4 kg
 - C 7.2 kg

State the ratio of the number of pupils who study for 7 hours to the total number of pupils.

- Answer :
- A 1 : 10
 - B 3 : 10
 - C 7 : 10