Fully-worked Solutions

Practice 12

Formative Practice

1 Total sales by canteen H
$= \text{RM}(40 \times 0.60 + 60 \times 0.80)$
$= \text{RM}72$
Total sales by canteen K
$= \text{RM}(30 \times 0.60 + 50 \times 0.80)$
$= \text{RM}58$
Difference in sales between the two canteens
$= \text{RM}72 - \text{RM}58$
$= \text{RM}14$
Answer: **A**

2 Number of refrigerators sold in February
$= 5 \times 3$
$= 15$
Total number of refrigerators sold in three months
$= (2 + 5 + 3) \times 3$
$= 30$
Ratio
$= 15 : 30$
$= 1 : 2$
Answer: **D**

3 (a) Categorical data
(b) Numerical data

4 (a) Categorical data

(b)

State	Frequency
Selangor	74
Penang	60
Perak	48
Kelantan	43
Johor	35

5 (a) Numerical data

(b)

Number of items	Tally mark	Frequency
1	𝍸	3
2	𝍸𝍸	5
3	𝍸	3
4	𝍸𝍸 I	6
5	𝍸	3

6

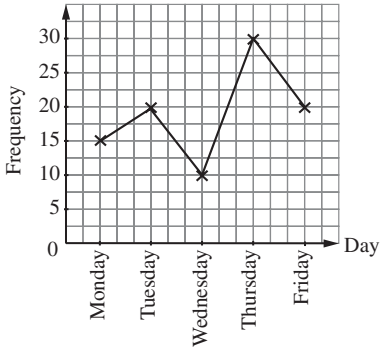
Money (RM)	Frequency
1	6
5	2
8	5
10	8
15	4

7 (a)

Monday	✉ ✉ ✉
Tuesday	✉ ✉ ✉ ✉
Wednesday	✉ ✉
Thursday	✉ ✉ ✉ ✉ ✉ ✉
Friday	✉ ✉ ✉ ✉

✉ represents 5 letters

(b)



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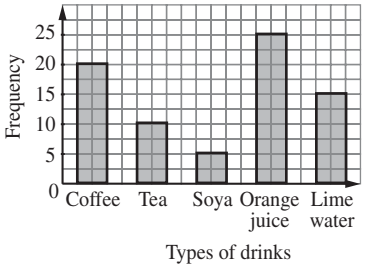
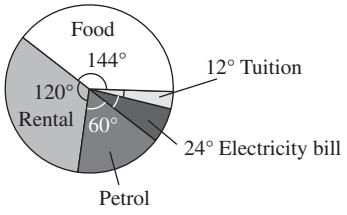


9 (a) Total expenses
= RM3 000
Food:
$\frac{1\,200}{3\,000} \times 360° = 144°$
Rental:
$\frac{1\,000}{3\,000} \times 360° = 120°$
Petrol:
$\frac{500}{3\,000} \times 360° = 60°$
Electricity bill:
$\frac{200}{3\,000} \times 360° = 24°$
Tuition:
$\frac{100}{3\,000} \times 360° = 12°$

(b)



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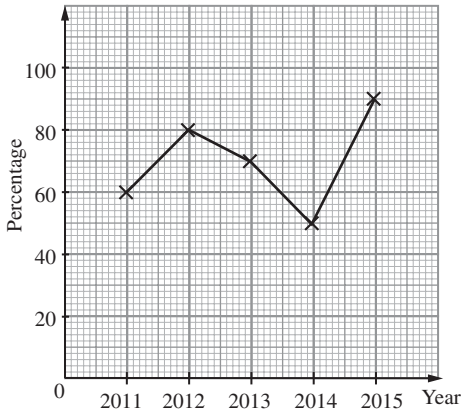

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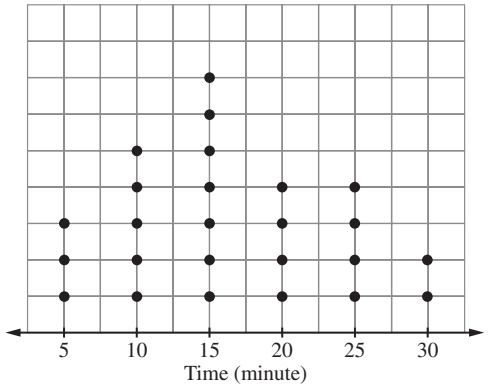


12

Stem	Leaf
4	3 5 7
5	6 8
6	0 2 6
7	1 4 4 5 7
8	4 7 9

Key: 5|6 means 56 marks

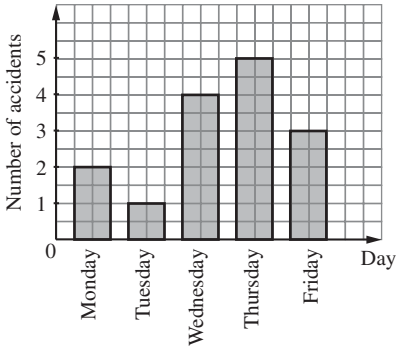
13

Stem	Leaf
12	40 80
17	30 50 80
20	10 20 50
25	00 40 40 80

Key: 20|20 means RM20.20

14 (a) ✓ (b) ✓ (c) ✓

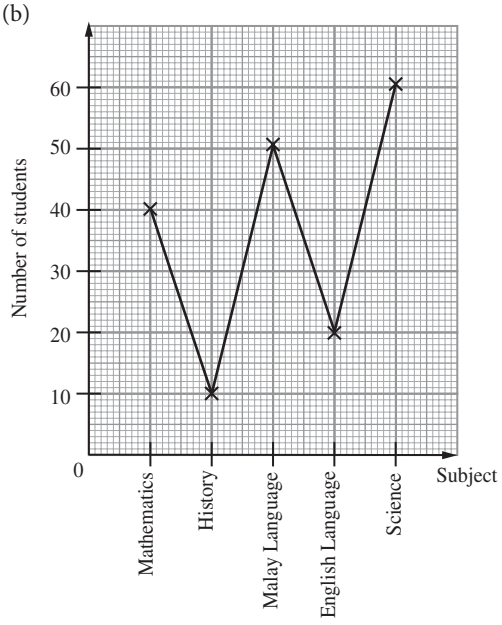
15



16 (a)

Subject	Number of students
Mathematics	$\frac{80°}{360°} \times 180 = 40$
History	$\frac{20°}{360°} \times 180 = 10$
Malay Language	$\frac{100°}{360°} \times 180 = 50$
English Language	$\frac{40°}{360°} \times 180 = 20$
Science	$\frac{120°}{360°} \times 180 = 60$

(b)



17 (a) ✗ (b) ✓ (c) ✗ (d) ✓

18 (a) False
(b) True
(c) True
(d) False

19 (a) Orange: 40 × RM0.40 = RM16.00
(b) Sarsi: 50 × RM0.45 = RM22.50
(c) Cola: 35 × RM0.30 = RM10.50

20 Total value of export for five years
= RM(30 000 + 50 000 + 40 000 + 60 000 + 70 000)
= RM250 000
Value of export in 2013
= 20% × RM250 000
= RM50 000

21 (a) $x + x + 40° + 80° = 360°$
$2x = 240°$
$x = 120°$
Angle of sector representing badminton = 120°

(b) $\frac{k}{32} = \frac{120}{80}$
$k = \frac{120}{80} \times 32$
$= 48$
Number of students who participated in basketball = 48

22 (a) Total number of students
= 2 + 6 + 12 + 4 + 4 + 6 + 2 + 4
= 40

(b) 6 + 2 + 4 = 12
$m = 70$

(c) Percentage of students who obtained less than 40 marks
$= \frac{2 + 6}{40} \times 100\%$
$= \frac{8}{40} \times 100\%$
= 20%

23 (a) Number of customers who refueled between 20 litres and 50 litres of petrol
= 20 + 15 + 5
= 40

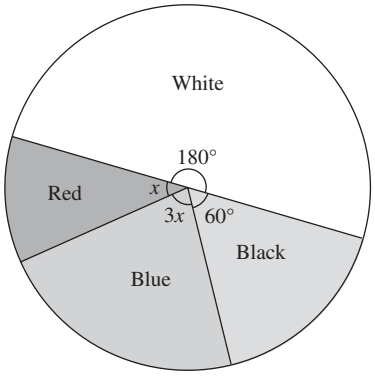
(b) Ratio of the number of customers who refueled 25 litres of petrol to the number of customers who refueled 45 litres of petrol
= 20 : 5
= 4 : 1

Summative Practice

1 Total sales for the four months
$= 20 + 30 + 40 + x$
$= 90 + x$
$x = \frac{40}{100} \times (90 + x)$
$x = \frac{2}{5} \times (90 + x)$
$5x = 180 + 2x$
$3x = 180$
$x = 60$
Answer: **D**

2 A Correct
B Correct
C The height of two rose plants with equal height is 176 cm.
Wrong
D Tallest height
= 187 cm
Shortest height
= 152 cm
Difference in height
= 187 – 152
= 35 cm
Correct
Answer: **C**

3



A $x + 3x + 60° + 180° = 360°$
$4x + 240° = 360°$
$4x = 120°$
$x = 30°$
Wrong

B $\frac{n}{10} = \frac{90°}{60°}$

$n = \frac{90°}{60°} \times 10 = 15$

Number of buyers who chose blue colour = 15

Wrong

C N = the total number of cars sold

$\frac{10}{N} = \frac{60°}{360°}$

$\frac{10}{N} = \frac{1}{6}$

$N = 60$

Wrong

D Correct

Answer: **D**

4 A True

B Number of vehicles that broke down on Monday = 8

Number of vehicles that broke down on Friday = 10

False

C 6 : 12 = 1 : 2

True

D Total number of vehicles that broke down on Monday until Thursday

= 8 + 6 + 12 + 4 = 30

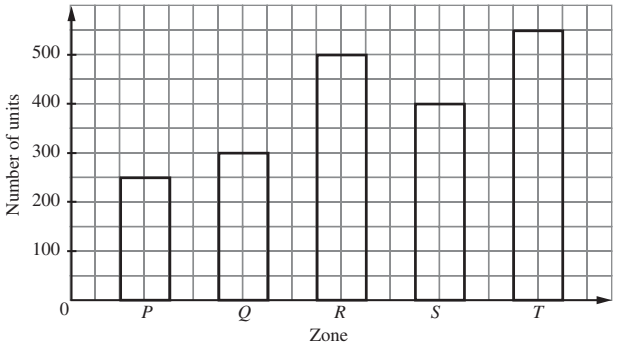
Percentage

$= \frac{30}{40} \times 100\% = 75\%$

True

Answer: **B**

5



6 (a)

Stem	Leaf
2	7 8
3	1 1 3 4 4
4	3 5 6 8
5	0 6 7 7 8 8 9
6	2 3 3 3 5 5 7 7
7	1 4 8 9 9
8	0 1 5 5 7

Key: 6|2 means 62 marks

(b) Number of students who achieved between 45 and 65 marks

= 13

7 (a) Television : $\frac{24\,000}{72\,000} \times 360° = 120°$

Refrigerator : $\frac{18\,000}{72\,000} \times 360° = 90°$

Washing machine : $\frac{12\,000}{72\,000} \times 360°$

$= 60°$

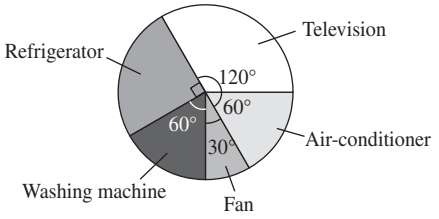
Fan : $\frac{6\,000}{72\,000} \times 360° = 30°$

Air-conditioner : $\frac{12\,000}{72\,000} \times 360°$

$= 60°$

Electrical item	Angle of sector
Television	120°
Refrigerator	90°
Washing machine	60°
Fan	30°
Air-conditioner	60°

(b)



8 (a) Sales of passenger cars for the year 2020

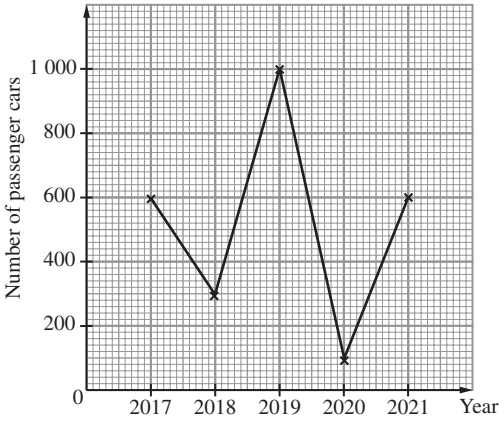
$= \frac{100 - 90}{100} \times 100$

$= \frac{10}{100} \times 1\,000 = 100$

Sales of passenger cars for the year 2021

$= \frac{100 + 500}{100} \times 100$

$= \frac{600}{100} \times 100 = 600$



(b) The sales of passenger cars were the lowest in the period was in 2020.