

7.4 Answers

GCSE Mathematics Statistics II : Handelling and Processing Data

7.4.1 Solutions (Example)

Height, h cm	Frequency	Mid Interval Value	Contribution to Total
$0 < h \leq 5$	4	2.5	10
$5 < h \leq 10$	6	7.5	45
$10 < h \leq 15$	8	12.5	100
$15 < h \leq 20$	2	17.5	35

$$mean = \frac{190}{20} = 9.5 \text{ cm}$$

7.4.2 Solutions (Exercise)

Answer 1

Number of bad peaches	Frequency	Mid Interval Value	Contribution to Total
$0 \leq bp \leq 4$	34	2	68
$5 \leq bp \leq 9$	11	7	77
$10 \leq bp \leq 14$	4	12	48
$15 \leq bp \leq 19$	1	17	17

$$mean = \frac{210}{50} = 4.2 \text{ bad peaches per box}$$

Answer 2

Number of typing mistakes	Frequency	Mid Interval Value	Contribution to Total
$0 \leq m \leq 2$	72	1	72
$3 \leq m \leq 5$	58	4	232
$6 \leq m \leq 8$	7	7	49
$9 \leq m \leq 11$	3	10	30

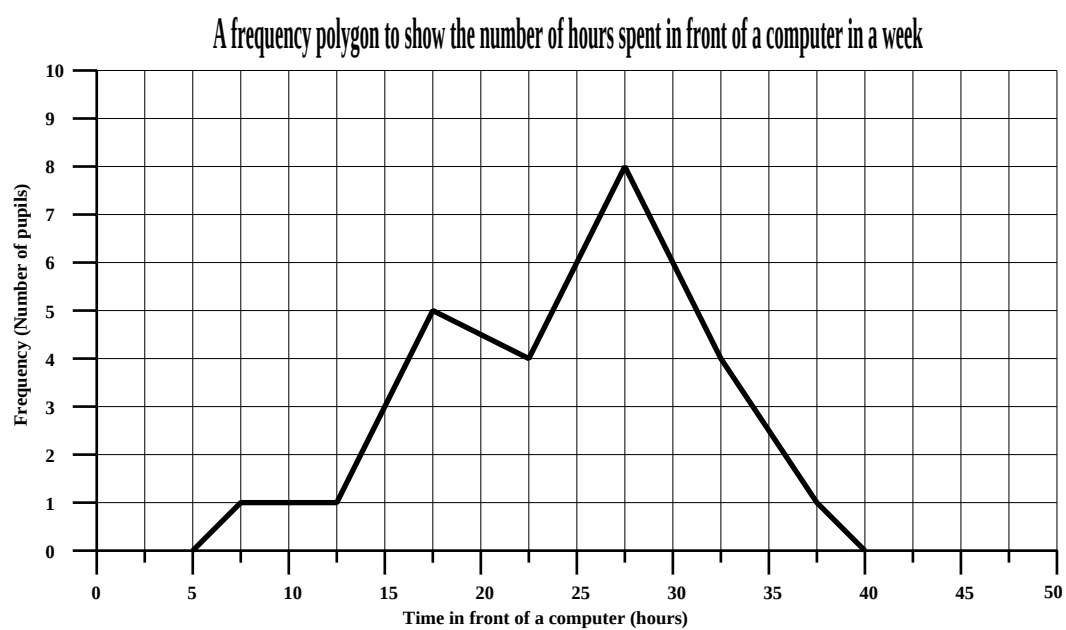
$$mean = \frac{383}{140} = 2.7 \text{ mistakes per page}$$

Answer 3

(a)

Number of hours	Tally	Frequency	Mid Interval Value
$5 \leq h < 10$		1	7.5
$10 \leq h < 15$		1	12.5
$15 \leq h < 20$		5	17.5
$20 \leq h < 25$		4	22.5
$25 \leq h < 30$		8	27.5
$30 \leq h < 35$		4	32.5
$35 \leq h < 40$		1	37.5

(b)



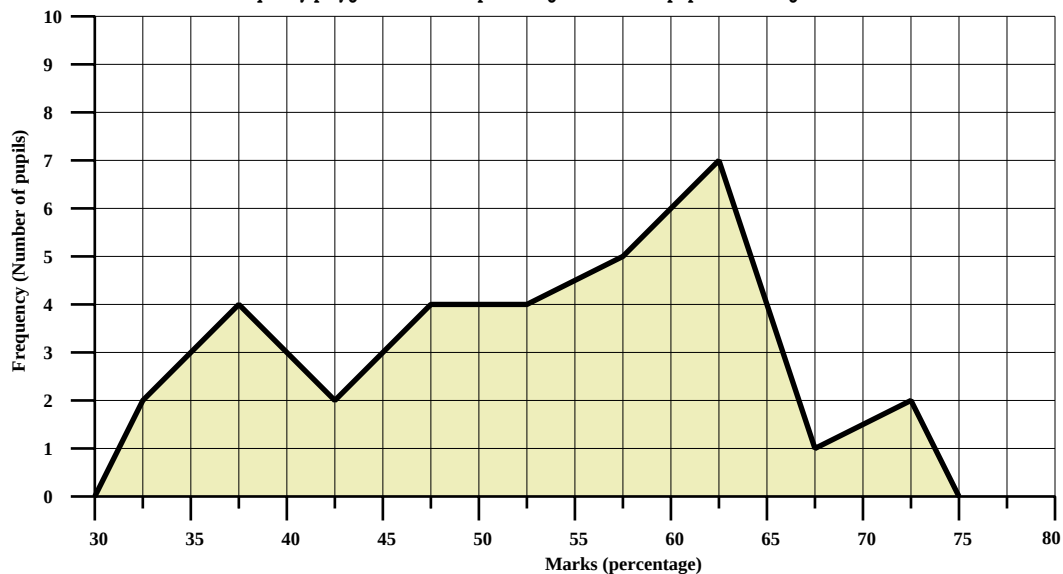
Answer 4

(a)

Mark	Tally	Frequency
$30 < m \leq 35$		2
$35 < m \leq 40$		4
$40 < m \leq 45$		2
$45 < m \leq 50$		4
$50 < m \leq 55$		4
$55 < m \leq 60$		5
$60 < m \leq 65$		7
$65 < m \leq 70$		1
$70 < m \leq 75$		2

(b)

A frequency polygon to show the percentage scores of 32 pupils in an English test



Answer 5

- (a) 45 people
- (b) 25%
- (c) 18 people

Answer 6

- (a) £7000
- (b) £2000 £2010 £7000 £8000 £10000 £12990

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Median is £7500

Answer 7

- (a) Maths
(b) (i) 40
(ii) 30
(c) The maths marks are more spread out.

Answer 8

(i)

Number of goals scored per match	Tally	Frequency
0		6
1		12
2		10
3		6
4		4
5		4
6		3

- (ii) There are 45 pieces of data.

$$\frac{45 + 1}{2} = 23$$

The 23rd piece of data is one of the 2s

∴ Median is 2 goals