Descriptive Stats 1 Answers

1) **QUESTION 5**

(a) $\frac{8+5+5+10+8+4+9+7+p+q}{10}=6.8$ **or** *equivalent* ***(M1)(A1)*** ***(C2)***

Note: Award ***(M1)*** for correct substituted mean formula, ***(A1)*** for correct substitution.

(b) (i) $p=5$ ***(A1)*****(ft)**

(ii) $q=7$ ***(A1)*****(ft)** ***(C2)***

Note: Follow through from their answers to parts (a) and (b) (i).

(c) 7 ***(M1)(A1)*****(ft)** ***(C2)***

Notes: Award ***(M1)*** for an attempt to order their numbers.
Follow through from their answers to parts (b)(i) and (ii).

M10/5/MATSD/SP1/ENG/TZ2/XX

2) **QUESTION 1**

(a) $\frac{7+4+5+4+8+T+14+4}{8}=7$ ***(A1)(A1)***

Note: Award ***(A1)*** for sum + T, ***(A1)*** for 56 or 7×8 or 8 in the denominator and 7 seen.

$T=10$ ***(A1)*** ***(C3)***

(b) 4 ***(A1)*** ***(C1)***

(c) 4, 4, 4, 5, 7, 8, 10, 14 ***(M1)***

Note: Award ***(M1)*** for arranging their numbers in order.

Median = 6 ***(A1)*****(ft)** ***(C2)***

[6 marks]

N09/5/MATSD/SP1/ENG/TZ0/XX

3) **QUESTION 3**

(a) Discrete ***(A1)*** ***(C1)***

(b) $\frac{0+24+40+51+44}{100}=\frac{159}{100}=1.59$ ***(M1)(A1)*** ***(C2)***

Notes: Award ***(M1)*** for correctly substituted formula.
Award ***(M1)(A1)*** for 1 or 2 if 1.59 is seen.
Award ***(M0)(A0)*** for 1 or 2 seen with no working.

(c) 1 ***(M1)(A1)*** ***(C2)***

Note: Award ***(M1)*** for attempt to order raw data (if frequency table not used) **or** ***(M1)*** for indicating halfway between 50^{th} and 51^{st} result or ***(M1)*** for 50^{th} percentile seen.

(d) 0 ***(A1)*** ***(C1)***

[6 marks]

M09/5/MATSD/SP1/ENG/TZ2/XX

Descriptive Stats 1 Answers

4)

Q2. (a)

Grade	Frequency
1	**1**
2	**4**
3	(2)
4	**3**
5	(4)
6	**5**
7	(1)

(A2)

*Award **(A1)** for three correct.*
*Award **(A0)** for two or fewer correct.* ***(C2)***

(b) Mode $= 6$ ***(A1)(ft)*** ***(C1)***

(c) Median $= 4.5$ ***(M1)***
(M1)** for attempt to order raw data (if frequency table not used)* ***(A1)(ft)
*or **(M1)** halfway between 10^{th} and 11^{th} result.* ***(C2)***

(d) $\frac{7}{20}$ (0.35, 35 %) ***(A1)(ft)*** ***(C1)***

[6 marks]

N08/5/MATSD/SP1/ENG/TZ0/XX

5)

QUESTION 14

(a) $a = 8$ ***(A1)***
$b = 16$ ***(A1)*** ***(C2)***

(b) $16 < x \leq 20$ ***(A2)*** ***(C2)***

(c) $\frac{(12\times 8+15\times 12+18\times 16)}{36}$ ***(M1)(A1)(A1)***
$= 15.7$ ***(A1)*** ***(C4)***

Notes: Award ***(M1)*** for method, ***(A1)*** for correct numbers, ***(A1)*** for their 36, and ***(A1)*** for answer. Follow through from answers to (a).

N05/5/MATSD/SP1/ENG/TZ0/XX

6)

QUESTION 2

(a) $n = 4$ ***(A2)*** ***(C2)***

(b) Mean number of games is 9.08 (accept 9). ***(M1)(A1)*** ***(C2)***

Note: Award ***(M1)*** for indicating a sum of games times frequency (possibly curtailed by dots) or for 227 seen.

(c) $\frac{6}{25}\times\frac{100}{1} = 24\,\%$ ***(M1)(A1)*** ***(C2)***

Note: Award ***(M1)(A0)*** if 6 is replaced by 10. No other alternative.

(d) Modal number of games is 7. ***(A2)*** ***(C2)***

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Descriptive Stats 1 Answers

7) **QUESTION 3**

(a) 6 hours $\left(\text{accept } (5.5-6.5)\right)$ ***(A2)*** ***(C2)***

(b) $\dfrac{(4\times 4+5\times 5+6\times 9+7\times 8+8\times 4)}{30}$ ***(M1)(A2)(A1)***

$=\dfrac{183}{30}$

$= 6.1$ ***(A2)*** ***(C6)***

Note:	Award ***(M1)*** for method, ***(A2)*** for all 5 terms in numerator correct. (***(A1)*** for 3 or 4 terms in the numerator correct), ***(A1)*** for denominator.

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