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9. DATA HANDLING

Class: VII, MATHEMATICS

INTEGRATED. SOLUTIONS

2025/26

TEACHING TASK

JEE MAINS.

01. $\frac{x_1 + x_2 + x_3 + x_4 + x_5 + x_6 + 15}{7} = 25$

$$\Rightarrow x_1 + x_2 + x_3 + x_4 + x_5 + x_6 = 160$$

$$\therefore \text{mean} = \frac{160}{6} = 26.67$$

Ans. B

02 $\frac{x_1 + x_2 + x_3 + x_4 + 10}{5} = 18$

$$\Rightarrow x_1 + x_2 + x_3 + x_4 = 80$$

$$\text{mean} = \frac{80}{4} = 20$$

Ans: —

03 Let the three consecutive ^{Even} integers be ~~$n-1, n, n+1$~~ $2n, 2n+2, 2n+4$.

Given $\frac{2n + (2n+2) + (2n+4)}{3} = 16$

$$\Rightarrow n = 7$$

$$\text{Largest no} = 2n+4 = 2(7)+4 = 18$$

Ans: C

04. $\frac{x_1 + x_2 + x_3 + 30}{4} = 22$

(2)

$\Rightarrow x_1 + x_2 + x_3 = 58$

mean = $\frac{58}{3} = 19.33$

Ans: B

05. $\frac{x_1 + x_2 + x_3 + x_4 + 10 + 20}{6} = 14$

$\Rightarrow x_1 + x_2 + x_3 + x_4 = 54$

mean = $\frac{54}{4} = 13.5$

Ans: A

06. let 5 consecutive odd numbers be
 $n, n+2, n+4, n+6, n+8$

mean = $\frac{n + (n+2) + (n+4) + (n+6) + (n+8)}{5} = 21$

$\Rightarrow n = 17$

Ans: A

07. $\frac{x_1 + x_2 + \dots + x_8 + 40}{9} = 30$

$\Rightarrow x_1 + x_2 + \dots + x_8 = 230$

: mean = $\frac{230}{8} = 28.75$

Ans: B

$$08 \quad \frac{x_1 + x_2 + \dots + x_7 + 8 + 12 + 15}{10} = 12 \quad (3)$$

$$\Rightarrow x_1 + x_2 + \dots + x_7 = 95$$

$$\therefore \text{mean} = \frac{95}{7} = 16.5$$

Ans. B

$$09 \quad \frac{x_1 + x_2 + x_3 + x_4 + 10 + 20}{6} = 16$$

$$\Rightarrow x_1 + x_2 + x_3 + x_4 = 66$$

$$\text{mean} = \frac{66}{4} = 16.5$$

Ans. B

$$10 \quad \frac{x_1 + x_2 + \dots + x_9 + 20 + 25 + 30}{12} = 25$$

$$\Rightarrow x_1 + x_2 + \dots + x_9 = 225$$

$$\therefore \text{mean} = \frac{225}{9} = 25$$

Ans. B

11. Conceptual
 please change the question as
 "In a data set with no repeated values,
 what is the mode reported as?"

Ans. B

12. Conceptual

Ans. B

13. Conceptual

Ans. B

14. Conceptual

Ans. B

15.	Conceptual	(4) Ans: D
16.	Conceptual	Ans: D
17.	Conceptual	Ans: B
18	Conceptual	Ans: A
19	Conceptual	Ans: D
20	Conceptual	Ans: C
21	Conceptual	Ans: C
22	Conceptual	Ans: B
23	Conceptual	Ans: A
24	conceptual	Ans: D

JEE ADVANCED

25	B) $\frac{7+7+7}{3} = 7$ D) $\frac{7+7+7+7}{4} = 7$	Ans: B, D
26	B) $\frac{15+15+15+15+15}{5} = 15$ $\Rightarrow \frac{10+20+12+18+15}{5} = 15$	Ans: B, C
27	Given 12, 15, 18, 12, 22, 18, 25, 12, 15, 18 mode = 12, 18, median = 16.5 A) The data is bimodal	Ans: A

28 Given data 10, 12, 15, 10, 20, 18, 22, 22, 12, 10.
mode = 10, Highest value = 22
Lowest value = 10
Range = $22 - 10 = 12$ Ans: C, D

29. Given data (Increase data).
7, 9, 12, 12, 15, 18, 20.
median = 12, mode = 12 Ans: A, D

30 Conceptual Ans: A, C, D

31. Assertion: Conceptual (True)
Reason: Conceptual (True) Ans: A

32. Assertion: Conceptual (True)
Reason: Conceptual (True) Ans: A

33. Assertion: Conceptual (False)
Reason: Conceptual (True) Ans: D

34. Assertion: Conceptual (False)
Reason: Conceptual (True) Ans: D

35. Assertion: Conceptual (False)
Reason: Conceptual (True) Ans: D

36. Assertion: Conceptual (True)
Reason: Conceptual (True) Ans: A

37. 75

⑥ Ans: B

38. We can not say.

Ans: —

39. Since $55 < 75$
The sum of the scores increases
Hence, the mean increases

Ans: A

40. mode $\rightarrow$ ~~can~~ measure of central tendency

Ans: B

41. Conceptual

Ans: B

42. Conceptual

Ans: C

43. Conceptual

Ans: D

44. Conceptual

Ans: B

45. Conceptual

Ans: B

46. Conceptual

Ans: B

47.
$$\frac{6+8+10+12+x}{5} = 8$$

$$\Rightarrow x = 4$$

Ans: 4

48. mean =
$$\frac{(80+85+90+92+78+88+95+82+72+85+90+88+97+78+85)}{15}$$

$$= 85.47$$

Ans: 85

49. mode = 5

Ans: 5

50. Given 5, 8, 7, 5, 2, 8, 4, 5, 9.

(7)

New data $\rightarrow$ 5, 8, 7, 5, 2, 8, 4, 5, 9, 4, 4.

5, 4 $\rightarrow$ repeats 3 times each.

$\therefore$ Mode = 5 and 4.

Ans: 5, 4

51. Given data 15, 20, 25, 30, 35

$\therefore$ median = 25

Ans: 25

52. Given data 18, 22, 25, 30, 35

New data 18, 22, 30, 35

$$\therefore \text{New median} = \frac{22+30}{2} = \frac{52}{2} = 26$$

Ans: 26

53. a) $\text{mean} = \frac{5+8+12+15}{4} = \frac{40}{4} = 10()$

b) $\text{Sum} = 20 \times 7 = 140()$

c) $\frac{18+22+30+25+x_1+x_2}{6} = 25$

$$\Rightarrow x_1 + x_2 = 95()$$

d) $\frac{10+12+15+18+20+x_1+x_2+x_3+x_4}{9} = 14$

$$\Rightarrow x_1 + x_2 + x_3 + x_4 = 51()$$

Ans: —

54 Conceptual

⑧ Ans: B

55 Conceptual

Ans: B

56 Conceptual

Ans: B

57 Conceptual

Ans: B

58 Conceptual

Ans: C

LEARNERS TASK (Ques)

01. $\text{mean} = \frac{4+7+9+12}{4} = 8$

Ans: B

02. $\frac{18+22+15+24+x}{5} = 20$

$\Rightarrow x = 21$

Ans: —

03. $\frac{10+20+x}{3} = 15$

$\Rightarrow x = 15$

Ans: C

04. Let the five consecutive integers be $x, x+1, x+2, x+3, x+4$.

$\therefore \frac{x+(x+1)+(x+2)+(x+3)+(x+4)}{5} = 12$

$\Rightarrow x = 10$

$\therefore \text{middle term} = x+2 = 10+2 = 12$ Ans: B

$$\boxed{05} \quad \frac{15 + 20 + 25 + 18 + 12 + x}{6} = 18$$

(9)

$$\Rightarrow x = 18$$

Ans: —

06. mode = 5

Ans: A

07. Conceptual

Ans: A

08. Conceptual

Ans: A

09. Conceptual

Ans: A

10. Conceptual

Ans: C

11. Given data 5, 8, $\boxed{12}$, 15, 20
median = 12

Ans: B

Ans: A

12. Conceptual

$\boxed{13}$ Average of 4th and 5th items

Ans: —

14. Conceptual

Ans: A

15. Conceptual

Ans: C

16. Conceptual

Ans: C

17. Conceptual

Ans: B

$\boxed{18}$ Conceptual

Ans: B

19. Conceptual

Ans: B

20. Conceptual

Ans: A

JEE MAINS LEVEL

(10)

01. $\frac{5+15+x}{3} = 10 \Rightarrow x = 10$

Ans. A

02. $\frac{5+15+x_1+x_2+x_3+x_4}{6} = 12$

$\Rightarrow x_1+x_2+x_3+x_4 = 52$

$\therefore \text{mean} = \frac{52}{4} = 13$

Ans: ~~B~~

03. $\frac{10+x_1+x_2+\dots+x_7}{8} = 18$

$\Rightarrow x_1+x_2+\dots+x_7 = 134$

$\therefore \text{mean} = \frac{134}{7} = 19.14$

Ans: —



04. please discard this question, as it has $\textcircled{11}$
~~adeq~~ insufficient data Ans: —

05.
$$\frac{20 + x_1 + x_2 + x_3 + x_4}{5} = 15$$
$$\Rightarrow x_1 + x_2 + x_3 + x_4 = 55$$
$$\therefore \text{mean} = \frac{55}{4} = 13.75$$

Ans: —

06. Minor mode (or) Lower mode

Ans: B

07. Conceptual

Ans: A

08. modes = 3, 7, 9 (Tri modal data)

Ans: A, B, C

09. Conceptual

Ans: A

10. Conceptual

Ans: C

11. Conceptual

Ans: A

12. Median = 6

Ans: A

13. Conceptual

Ans: B

~~14~~ JEE ADVANCED LEVEL

14. Given data 2, 4, 6, 4, 8, 10
mode = 4

Ans: C

15. B) $\frac{10 + 10 + 10 + 10}{4} = 10$ C) $\frac{5 + 15 + 10 + 10}{4} = 10$

Ans: B, C



16. Given data 5, 7, 8, 5, 2, 8, 4, 5, 6, 3, 5 (12)
 A) Conceptual ✓ | c) 2, 3, 4, 5, 5 [5] 5, 6, 7, 8, 8
 B) mode = 5 ✓ | median = 5
 c) Conceptual (False)
 Ans: A, B

17. Given 10, 12, 15, 10, 20, 18, 22, 22, 12, 10
 Mode = 10,
 A) Conceptual (False) | c) mode = 10 (True)
 B) Conceptual (False) | D) Range = 22 - 10
 = 12 (True)
 Ans: C, D

18. Conceptual
 Ans: B, C

19. Conceptual
 Ans: B, D

20. Assertion: Conceptual (True)
 Reason: Conceptual (True)
 Ans: A

21. Assertion: Conceptual (True)
 Reason: Conceptual (True)
 Ans: A

22. Assertion: Conceptual (True)
 Reason: Conceptual (False)
 Ans: C

23. Assertion: Conceptual (False)
 Reason: Conceptual (True)
 Ans: D

24. Assertion: Conceptual (True)
 Reason: Conceptual (True)
 Ans: A

25 Assertion: Conceptual (True)
Reason: Conceptual (True)

(13)
Ans: A

26
$$\text{mean} = \frac{80 + 85 + 90 + 92 + 78 + 88 + 95 + 82}{8} = \frac{690}{8}$$
$$= 86.25$$

Ans: —

27
$$\text{mean} = \frac{690 + 75 + 98}{10} = \frac{863}{10} = 86.3$$

Ans: —

28 Conceptual

Ans: C

29 Conceptual

Ans: D

30 Conceptual

Ans: C

31 Conceptual

Ans: B

32
$$\text{mean} = \frac{72 + 85 + 90 + 88 + 94 + 78 + 85}{7}$$
$$= 84.57$$

Ans: 84

33
$$\text{New mean} = 84.57 + 5 = 89.57$$

Ans: 89

34 5, 5, 1, 9

Ans: —

35 2

Ans: 2

36 Given data 2, 4, 5, 6, 8, 9

$$\text{Median} = \frac{5 + 6}{2} = 5.5$$

Ans: 5

38

- a) Conceptual (s)
- b) Conceptual (~~t~~)
- c) Conceptual (P)
- d) Conceptual (r)
- e) Conceptual (v)

(14)

Ans: s, t, P, r, v

37Given data 1, 2, 3, 4, 6, 8

$$\therefore \text{median} = \frac{3+4}{2} = 3.5$$

Ans: 3 $\Rightarrow$ THE END $\Leftarrow$ 