

Exercise 14E

Question 1:

= 1418

Mean marks of 7 students = 226Sum of marks of seven students = $(226 \times 7) = 1582$ Marks obtained by 6 students = (340 + 180 + 260 + 56 + 275 + 307)

- .. Marks obtained by seventh student
- = [(Sum of marks of 7 students) (marks obtained by 6 students)]
- = (1582 1418)=164
- :. Marks obtained by seventh student = 164

Question 2:

Mean weight of 34 students = 46.5 kgTotal weight of 34 students = $(34 \times 46.5)\text{kg}$ = 1581 kgMean weight of 34 students and the teacher = (46.5 + 0.5)kg = 47kg(since 500 g = 0.5 kg)

- .. Total weight of 34 students and the teacher
- $= (47 \times 35)$ kg = 1645kg
- \therefore Weight of the teacher = (1645 1581)kg = 64kg

Question 3:

Mean weight of 36 students = 41 kg

Total weight of 36 students = 41 x 36 kg = 1476kg

One student leaves the class mean is decreased by 200 g. \therefore New mean = (41 - 0.2)kg = 40.8 kg (since 200 g = 0.2 kg)

Total weight of 35 students = 40.8 x 35 kg = 1428 kg. \therefore the weight of the student who left = (1476 - 1428)kg = 48 kg.

Question 4:

Mean weight of 39 students = 40 kg

Total weight of 39 students = (40 x 39) = 1560 kg

One student joins the class mean is decreased by 200 g.

∴ New mean = (40 - 0.2)kg = 39.8 kg (since 200 g = 0.2 kg)

Total weight of 40 students = (39.8 x 40)kg = 1592 kg.

∴ the weight of new student

= Total weight of 40 students - Total weight of 39 students

= 1592 - 1560 = 32 kg

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