Exercise 14E

Question 1:
Mean marks of 7 students = 226
Sum of marks of seven students = (226 x 7) = 1582
Marks obtained by 6 students = (340 + 180 + 260 + 56 + 275 +307)
= 1418
∴ 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 kg
Total weight of 34 students = (34 x 46.5)kg = 1581 kg
Mean 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 x 35)kg = 1645kg
∴ 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.
∴ 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.
∴ 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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