7 The students in Class A and in Class B take the same examination.

There are 28 students in Class A and 32 students in Class B.
The mean score for all the students in both classes is 72.6
The mean score for the students in Class A is 75

(a) Work out the mean score for the students in Class B.

Total students = 28 + 32
                = 60

Mean = marks / students

mean × student = marks

72.6 × 60 = 4356 total marks

Class A
mean × students = marks
  75 × 28 = 2100 marks for A

Class B
 4356 − 2100 = 2256 marks for B

    mean = 2256 / 32 = 70.5

(4)

The lowest score in Class A is 39
The range of scores for Class A is 57
The lowest score in Class B is 33
The range of scores for Class B is 60

(b) Find the range of scores for all the students in both classes.

Class A

lowest = 39
) +57
96 = highest

Class B

lowest = 33
) +60
93 = highest

Overall range = largest − smallest
              = 96 − 33
              = 63

(3)

(Total for Question 7 is 7 marks)

8 A scientist is investigating the weight of 50 tigers.

Here is some information about these tigers.

	Type of tiger	
	Siberian	Bengal
Number of tigers	22	28
Mean weight of tigers (kg)	260	

The mean weight of all 50 tigers is 218 kg

Work out the mean weight of the Bengal tigers.

how many × mean = weight

50 × 218 = 10900

Siberian   22 × 260 = 5720

Bengal   10900 − 5720 = 5180 kg for Bengal

$\dfrac{5180}{28}$ = 185 kg

.... kg

(Total for Question 8 is 3 marks)

P 6 8 7 2 0 A 0 1 1 3 2

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8   60 students sat a Mathematics exam.

The mean mark for the 32 students in Class A was 55
The mean mark for the 28 students in Class B was 52

Find the mean mark for all 60 students.

students × mean = total mark

$$\underline{A} \qquad 32 \times 55 = 1760$$

$$\underline{B} \qquad 28 \times 52 = 1456$$

$$\text{Total mark} = 1760 + 1456$$
$$= 3216$$

$$\text{Mean} = \frac{3216}{60}$$
$$= 53.6$$

(Total for Question 8 is 3 marks)

8 Alison buys 2 boxes of strawberries, box **A** and box **B**.

Box **A** contains 15 strawberries.
The strawberries in box **A** have a mean weight of 24 grams.

Box **B** contains 25 strawberries.
The strawberries in box **B** have a mean weight of 18 grams.

Alison puts all 40 strawberries into a bowl.
Work out the mean weight of the 40 strawberries.

Ⓐ $15 \times 24 = 360$

Ⓑ $25 \times 18 = 450$

Total weight = $360 + 450$
= 810

Mean = $\dfrac{810}{40}$
= $20 \cdot 25$

.... grams

(Total for Question 8 is 3 marks)

11 There are 12 boys and 8 girls in a class.
    The boys and the girls have some coins.

    The mean number of coins that the boys have is 5.5
    The girls have a total of 18 coins.

    Work out the mean number of coins the 20 children have.

Ⓑ $12 \times 5.5 = 66$

Total coins $= 66 + 18$

$= 84$

Mean $= \dfrac{84}{20}$

$= 4.2$

(Total for Question 11 is 3 marks)

12 Ali uses a fitness tracker to count the number of steps he walks each day for 7 days.

For the first 4 days, his mean number of steps is 11 800
For the next 3 days, his mean number of steps is 13 207

Work out his mean number of steps for the 7 days.

$4 \times 11800 = 47200$

$3 \times 13207 = 86821$

Total steps $= 47200$
$\qquad + 86821$

$\qquad = 86821$

mean $= \dfrac{86821}{7}$

$= 12403$

(Total for Question 12 is 3 marks)

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