Solutions

Questions on the Mean

Q1.

Steph's weight in kilograms is 2x + 9Kyle's weight in kilograms is 4x - 7

Write down an expression, in terms of *x*, for the mean of their weights.



3 ∝ ≁] (Total for question = 2 marks)

Q2.

There are 15 children at a birthday party. The mean age of the 15 children is 7 years.

9 of the 15 children are boys. The mean age of the boys is 5 years.

Work out the mean age of the girls.

Totel	ages	5	15 x	٦	1	105	
Total 3	مع دوده	=	9 x	5	۶.	45	
Total	girls ag	es				60	
girls' 1	n Can	=	60	<u>م</u> ا	0		



Q3.

50 students each did a mathematics test. The mean score for these 50 students was 8.4

There were 30 boys. The mean score for these 30 boys was 8.25

Work out the mean score for the girls.



(Total for question = 3 marks)

Q4.

23 girls have a mean height of 153 cm.17 boys have a mean height of 165 cm.

Work out the mean height of all 40 children.

Total for girls 23x153 = 3519 Total for boys 17 × 165 = 2805 + 6324 Total for group mean for group = $\frac{6324}{40}$ 158.1 cm

(Total for Question is 3 marks)

Q5.

The table gives information about the time it took each of 80 children to do a jigsaw puzzle.

	Number of children	Mean time (minutes)	Total Time
Boys	32	32.4	1036-8
Girls	48	28.4	1363.2

Work out the mean time for all 80 children.

mean for group =

2400

Q6.

Alan works in a gym. One week he recorded the number of people who visited the gym each day.

For Monday to Friday, the mean number of people per day was 98 For the whole week, the mean number of people per day was 114

On Saturday, 162 people visited the gym. Work out the number of people who visited the gym on Sunday.

Mon-Fri total 98 x 5 = 490
Sut
$$\frac{162}{652}$$

Sun 798-652 = 146

whole week total = 7 x 114 = 798

(Total for question = 3 marks)

146

Q7.

There are 10 boys and 20 girls in a class. The class has a test.

The mean mark for all the class is 60 The mean mark for the girls is 54

Work out the mean mark for the boys.

Total	for	class	=	30 × 60	= 1800
Total	for	girls	=	20 x 54	= 1080 -
To Gal	fus	60 55			720
Mean	for	boys	(1	720	= 72

10

(Total for question = 3 marks)

2

Q8.

Q9.

There are 18 packets of sweets and 12 boxes of sweets in a carton.

The mean number of sweets in all the 30 packets and boxes is 14 The mean number of sweets in the 18 packets is 10

Work out the mean number of sweets in the boxes.

Total Sucett	30 x 14	=	420	
Puckets	18 x 10	5	180	_
Bones			240	

 $Boxes mean = \frac{240}{12} = 20$



Total

12+6+15

=

33

The mean of the 4 numbers on Ed's cards is 10

Work out the number on the 4th card.

7 7

(Total for Question is 3 mark)

40 - 33 = 7

 $4 \times 10 = 40$

Q10.

* Tina went on a cycling holiday. For the first 5 days, Tina cycled a mean distance of 55 kilometres per day.

On the sixth day, Tina cycled 50 kilometres.

Andy says,

"for all 6 days, the mean distance that Tina cycled per day was 52.5 kilometres".

Is Andy correct? You must show your working.	No	Total f	5 = 275 $50 + 325$			
		Total.				
Mæan = Q11.	$\frac{325}{6} =$	54.17km	not . (T	52・5 K- otal for questi	ion = 4	4 marks)
There are 10 boys and 20 girls Mrs Brook gave all the class a	s in Mrs Brook's test.	class.	total	30 x 60	t,	1800
The mean mark for all the class The mean mark for the girls is Work out the mean mark for the	ss is 60 56 ne boys.	Girls Boys	total total	20 x 56	E	680
	Boys	mean =	680	- 68		
			(Тс	otal for Questio	on is :	3 marks)
Q12.						

Alex is xcm tall.

Bob is 10cm taller than Alex. Cath is 4cm shorter than Alex.

Write an expression, in terms of *x*, for the mean of their heights in centimetres.



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Ken is x years old. Liam is (x + 4) years old. Tina is 3x years old.

Write an expression, in terms of *x*, for the mean of their ages.



(Total for question = 2 marks)

Q14.

Hertford Juniors is a basketball team.

At the end of 10 games, their mean score is 35 points per game.

At the end of 11 games, their mean score has gone down to 33 points per game.

How many points did the team score in the 11th game?

Total for 11 games = $33 \times 11 = 363$ Total for 10 games = $35 \times 10 = \frac{350}{13} - \frac{11^{61}}{13}$ 13

Q15.

25 students in class A did a science exam. 30 students in class B did the same science exam.

The mean mark for the 25 students in class A is 67.8 The mean mark for all the 55 students is 72.0

Work out the mean mark for the students in class B.

 $M_{can} \ for \ B = \frac{2265}{30} = 75.5$

Q13.

75.5 (Total for Question is 3 marks)

(Total for Question is 3 marks)

Total Marks 55 x72 = 3960

Total B $25 \times 67.8 = 1695 - 2265$

for A and B