Mathematics

Finding the Mean worksheet

Mr Millar

Try this

Year 8 students are collecting soup tins for a food kitchen charity. They are working in groups and there is a prize for the group that does the best. Decide who should win the prize. Give reasons for your decision.

Lucy's group

Lucy – 7 tins
Laura – 3 tins
Dara – 2 tins
Lorraine – 6 tins
Rajesh – 2 tins

Harry's group

Harry – 4 tins
Dora – 6 tins
Ali – 3 tins
Sarah – 1 tin
Priya – 2 tins
James – 2 tins
Cala – 3 tins

Connect

5 cards have a mean of 6. One of the cards has been covered up.
What is its value?

| 4 | 10 | 3 | 4 | ? |

| 4 | 10 | 3 | 4 |

Independent task

1. Find the mean of these sets of numbers

| 3, 6, 4, 5, 7 | 3, 6, 4, 5, 7, 1, 9 | 21, 42, 28, 35, 49 | –3, –6, –4, –5, –7 |

2. These seven cards have a mean of 2. Two of the cards have been covered up. What are all the possible positive whole number values of the cards?
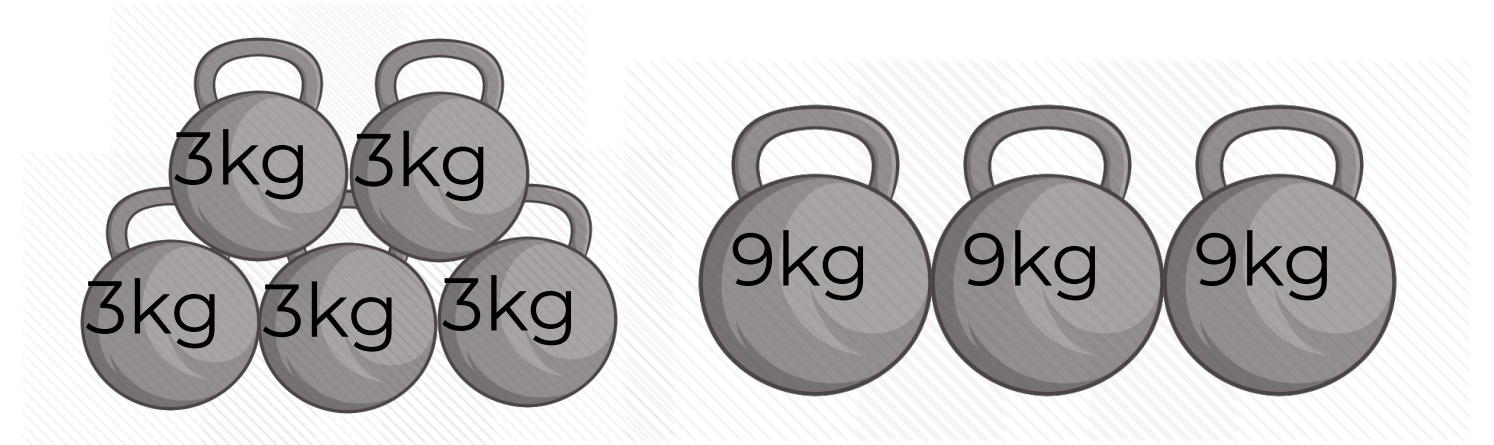
| 1 | 4 | 0 | 3 | 1 | ? | ? |

Explore

Imagine you have a large supply of 3kg and 9kg weights.

Can you find combinations of 3kg and 9kg weights whose mean weight is a whole number of kilograms?

The smallest mean that you can get is...

The smallest number of weights you need to make a mean weight of 6kg is...

You can get a mean of 7kg by having ___ lots of 3kg weights and ___lots of 9kg weights...

Answers

Try this

Year 8 students are collecting soup tins for a food kitchen charity. They are working in groups and there is a prize for the group that does the best. Decide who should win the prize. Give reasons for your decision. Mean = Total ÷ Number of pieces of data
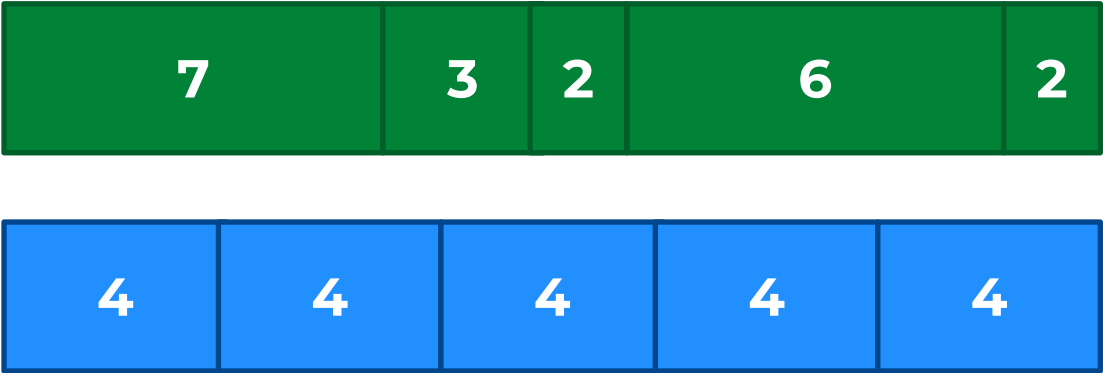
Lucy's group

Lucy – 7 tins
Laura – 3 tins
Dara – 2 tins
Lorraine – 6 tins
Rajesh – 2 tins

Mean = 20 ÷ 5 = 4

Harry's group

Harry – 4 tins
Dora – 6 tins
Ali – 3 tins
Sarah – 1 tin
Priya – 2 tins
James – 2 tins
Cala – 3 tins

Mean = 21 ÷ 7 = 3

7	3	2	6	2

4	4	4	4	4

Connect

5 cards have a mean of 6. One of the cards has been covered up.
What is its value?

Mean = Total ÷ Number of pieces of data

So Total = 5 x 6 = 30

| 4 | 10 | 3 | 4 | ? |

| 4 | 10 | 3 | 4 |

21

Missing value = 9

| 6 | 6 | 6 | 6 | 6 |
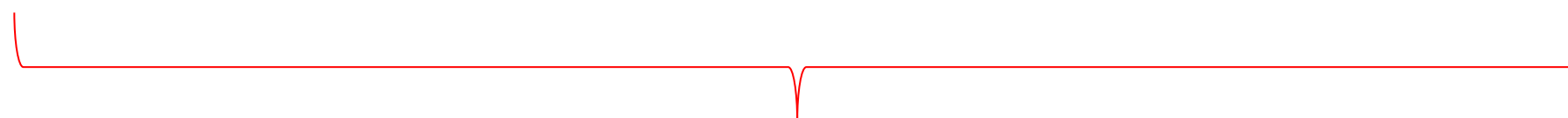
30

Independent task

1. Find the mean of these sets of numbers

3, 6, 4, 5, 7	3, 6, 4, 5, 7, 1, 9	21, 42, 28, 35, 49	–3, –6, –4, –5, –7
5	5	35	-5

2. These seven cards have a mean of 2. Two of the cards have been covered up. What are all the possible positive whole number values of the cards?

1	4	0	3	1	?	?

5 and 0   2 and 3

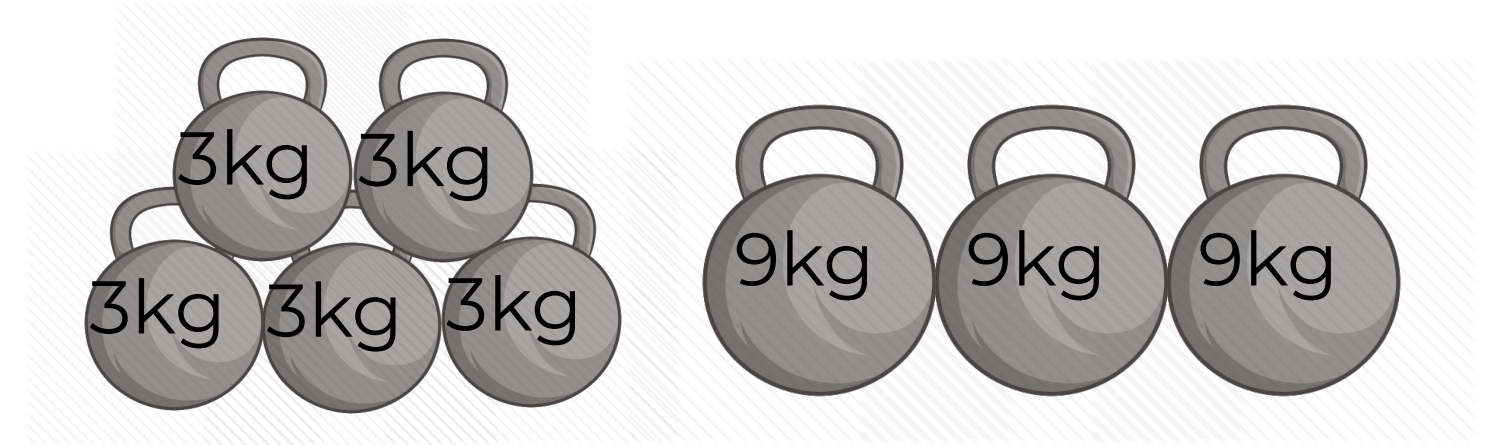4 and 13   1 and 4

and 2   0 and 5

Explore

Imagine you have a large supply of 3kg and 9kg weights.

Can you find combinations of 3kg and 9kg weights whose mean weight is a whole number of kilograms?

The smallest mean that you can get is…	The smallest number of weights you need to make a mean weight of 6kg is…	You can get a mean of 7kg by having ___ lots of 3kg weights and ___ lots of 9kg weights…
3kg (just use 3kg weights)	One 3kg weight, one 9kg weight	One 3kg weight, two 9kg weights