

Discussion Problems

Step 8: The Mean

National Curriculum Objectives:

Mathematics Year 6: (6S3) [Calculate and interpret the mean as an average](#)

About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 6 Statistics](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

The Mean

1. A restaurant has worked out the weight of some ingredients that they use each day during the week in kg. They have rounded the weight to 1 decimal place.



	Carrots	Potatoes	Beef	Chicken	Fish
Mon	39kg	75kg	50kg	65.2kg	56.3kg
Tue	41kg	90kg	75.1kg	72kg	60.1kg
Wed	53.1kg	107.4kg	79kg	61.3kg	51kg
Thu	52.7kg	102.2kg	81kg	71kg	69.9kg
Fri	71kg	125.5kg	105.1kg	95kg	78kg
Sat	85.9kg	150kg	125kg	140.4kg	92.5kg
Sun	64kg	120.7kg	90.5kg	104kg	101.1kg
Mean kg					

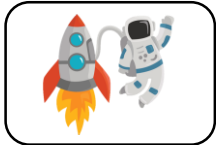
Calculate the mean weight of each ingredient used in a week.

The manager of the restaurant would like to organise the data. Explore the different ways that it could be ordered.

DP

2. Matt wants to trade in 5 video games so that the mean value of each game is £5.60.

These are the games that he could trade in from his collection:



SpaceCraft
Value: £4.55



Schoolnite
Value: £5.25



Super Dario
Value: £6.35



Rocket Racing
Value: £6.35



Sugar Rush
Value: £4.55



The Legend of Helga
Value: £6.55



Pyro the Dragon
Value: £5.30



Monic the Raccoon
Value: £5.30

Explore the combinations of games that he could trade in.

Is it possible to get the same mean value for each game by only trading in 4 games?

DP

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Mean kg	58.1kg	110.1kg	86.5kg	87kg	72.7kg

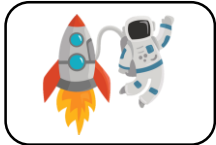
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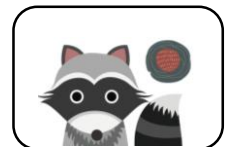
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Monic the Raccoon
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Explore the combinations of games that he could trade in.

Various answers possible including: SpaceCraft, Schoolnite, Pyro the Dragon, Super Dario and The Legend of Helga.

Is it possible to get the same mean value for each game by only trading in 4 games?

Yes – Schoolnite, The Legend of Helga, Pyro the Dragon and Monic the Raccoon.

DP