

# Discussion Problems

## Step 5: Percentage of an Amount 2

### National Curriculum Objectives:

Mathematics Year 6: (6R2) [Solve problems involving the calculation of Percentage \[for example, of measures, and such as 15% of 360\] and the use of Percentage for comparison](#)

### 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 Percentages](#) resources.

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

## Percentage of an Amount 2

1. Georgia wants to pack up some leftover food and drink from a party in a bag. She has worked out how much of each food and drink she has leftover below.

Items	Original weight of item	% leftover	Amount leftover
Pizza	320g	50%	
Orange Juice	1.8L	37.5%	
Apple Juice	550ml	22%	
Biscuits	2.8kg	20%	
Doughnuts	336g	12.5%	
Hot cross buns	450g	12%	
Strawberries	1.7kg	27%	
Milk	1.2L	17%	



The bag can only carry a maximum of 750g of food, and a maximum of 700ml of liquid.

Explore the different combinations of food and drink that she could put in the bag.

DP

2. Below are the rules for a game based on finding a percentage of an amount.

- Take it in turns with a partner to roll two dice.
- The first roll determines your percentage. The second roll determines a number.
- You must then work out the percentage of the number that you have rolled.
- Add your numbers together.
- The player with the number closest to 350 wins.

Roll 1	Percentage
	28%
	41%
	67%
	52%
	13%
	77%

Roll 2	Number
	276
	38
	255
	321
	94
	108

DP

## Percentage of an Amount 2

1. Georgia wants to pack up some leftover food and drink from a party in a bag. She has worked out how much of each food and drink she has leftover below.

Items	Original weight of item	% leftover	Amount leftover
Pizza	320g	50%	160g
Orange Juice	1.8L	37.5%	675ml
Apple Juice	550ml	22%	121ml
Biscuits	2.8kg	20%	560g
Doughnuts	336g	12.5%	42g
Hot cross buns	450g	12%	54g
Strawberries	1.7kg	27%	459g
Milk	1.2L	17%	204ml



The bag can only carry a maximum of 750g of food, and a maximum of 700ml of liquid.

Explore the different combinations of food and drink that she could put in the bag.

**Various answers, for example: food: pizza (160g) and biscuits (560g) = 720g; drinks: orange juice (675ml).**

DP

2. Below are the rules for a game based on finding a percentage of an amount:

- Take it in turns with a partner to roll two dice.
- The first roll determines your percentage. The second roll determines a number.
- You must then work out the percentage of the number that you have rolled.
- Add your numbers together.
- The player with the number closest to 350 wins.

Roll 1	Percentage
	28%
	41%
	67%
	52%
	13%
	77%

Roll 2	Number
	276
	38
	255
	321
	94
	108

**Various answers, for example: See below where player 2 would win.**

Player	Roll 1	Roll 2	Roll 3	Total
1	1 and 3 (28% of 255 = 71.4)	4 and 4 (52% of 321 = 166.92)	6 and 1 (77% of 276 = 212.52)	450.84
2	2 and 6 (41% of 108 = 44.28)	5 and 1 (13% of 276 = 35.88)	3 and 4 (67% of 321 = 215.07)	295.23

DP