

Potions Capacity



Wizard William and Witch Winifred are mixing potions. Can you help find all the possibilities for their recipes?

1. Wizard William can use any 3 ingredients. His potion needs to measure exactly 100ml. Which ingredients could he use?

2. Congratulations! What will Wizard William's potion do?

3. Witch Winifred has to use more than 3 ingredients. Her potion also needs to measure exactly 100ml. Which ingredients could she choose?

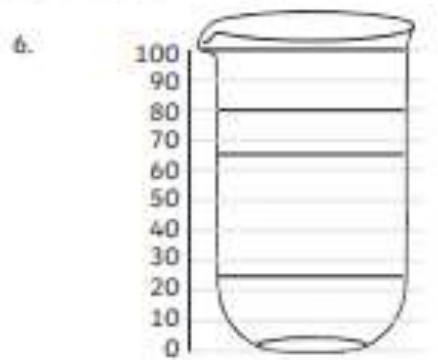
4. Congratulations! What will Witch Winifred's potion do?

Potions Capacity

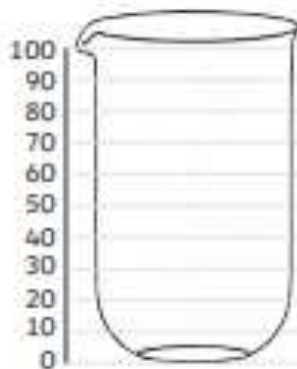


Apprentice Alf has mixed some potions, but he has forgotten to write down the recipes. Can you work out which ingredients are in each bottle by looking at the shelf above?





7. Can you also mix another potion for him and draw it in the last bottle?





Capacity Challenges

Challenge 1

Janine needs to fill a bucket with 2 litres (2000ml) of water. She has bottles which hold the following amounts:

200ml, 250ml, 500ml, 750ml

Give two different ways that Janine can fill the bucket (you may use each container more than once).



Capacity Challenges

Challenge 2

Lucien needs to fill a bucket with 1 litre 500ml (1500ml). He has containers which hold the following amounts:

100ml, 200ml, 250ml, 300ml.

Give two different ways that Lucien can fill the bucket (you may use each container more than once).



Capacity Challenges

Challenge 3

Siobhan needs to fill a bucket with 2 litres 500ml (2500ml). She has containers which hold the following amounts:

250ml, 300ml, 500ml, 750ml

Give two different ways that Siobhan can fill the bucket (you may use each container more than once).



Potions Capacity answers

1. Nettle soup, slug slime and teachers' tears

Dragon's blood, briny broth and essence of nightshade

Dragon's blood, nettle soup and dawn dew

2. Anything creative for the answer

3. There are a number of answers - should add up to 100ml

4. Anything creative for the answer

5. Dragon's blood, teachers' tears and snake oil

6. Slug slime, nettle soup
Snake oil and briny broth

7. There are a number of answers - as long as the measurements are correct

Capacity Challenges **Answers**

All problems have a variety of possible answers,
here are some examples:

Challenge 1: (2000ml)

- $200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml}$
- $250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml}$
- $500\text{ml} + 500\text{ml} + 500\text{ml} + 500\text{ml}$
- $750\text{ml} + 750\text{ml} + 500\text{ml}$
- $500\text{ml} + 500\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml}$

Challenge 2: (1500ml)

- $100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml} + 100\text{ml}$
- $200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml} + 250\text{ml} + 250\text{ml}$
- $250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml}$
- $300\text{ml} + 300\text{ml} + 300\text{ml} + 300\text{ml} + 300\text{ml}$
- $300\text{ml} + 300\text{ml} + 300\text{ml} + 200\text{ml} + 200\text{ml} + 200\text{ml}$

Challenge 3: (2500ml)

- $250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml} + 250\text{ml}$
- $500\text{ml} + 500\text{ml} + 500\text{ml} + 500\text{ml} + 500\text{ml}$
- $750\text{ml} + 750\text{ml} + 750\text{ml} + 250\text{ml}$
- $750\text{ml} + 750\text{ml} + 250\text{ml} + 250\text{ml} + 500\text{ml}$