

Wizard William has mixed some potions.

- 1) What is the volume of each potion?



\_\_\_\_\_ litres \_\_\_\_\_ ml



\_\_\_\_\_ litres \_\_\_\_\_ ml



\_\_\_\_\_ litres \_\_\_\_\_ ml

- 2) Wizard William needs to fill a cauldron with a capacity of 10 litres. How many jars of nettle soup should he add?

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Wizard William and Witch Winifred are making potions with specific volumes.



- 1) Witch Winifred has made these potions. This label has fallen off one of the cauldrons. Witch Winifred thinks that the label has come from cauldron 3.

4 litres 750ml

snake oil	×1
essence of nightshade	×4
nettle soup	×1

briny broth	×5
dawn dew	×10
teachers' tears	×1

dragon blood	×1
teachers' tears	×2

dawn dew	×3
snake oil	×1
slug slime	×2

Why is Winifred incorrect? Which bottle has the label come from?

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- 2) Wizard William is making potions with a volume of 2 litres. He can only use two different ingredients. How could he make up his potion and how many jars of each ingredient would he need?

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Professor Twinkl has told her students that they can use four bottles to make any potion they choose. However, each bottle should be a different ingredient.



- 1) Wizard Wilson decides that he will make the potion with the smallest volume. Which bottles should he use? What will the volume of liquid be?

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- 2) Witch Wenda decides to make the potion with the largest volume. Which bottles should she use? What will the volume of liquid be?

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- 3) For her next lesson, Professor Twinkl decides to allow students to use four bottles, with up to two bottles of any ingredient. How will Wilson and Wenda change their recipes?

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- 4) Twin witches, Wilma and Wren, both decide to make potions using four bottles. They each start with two bottles of snake oil. Then, they use different combinations of ingredients. Both witches end up with potions with a volume of a whole number of litres. What ingredients could each have used? Find as many different combinations as you can.

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