

Non-alcoholic cocktails

Name _____ Date _____

Choose a cocktail and make it up according to the recipe.

Orangeberry Punch

- 1 cup of orange juice
- 2 cups of cranberry juice
- 6 cups of ginger ale

Mix together. Serve with ice.

Safe Sex

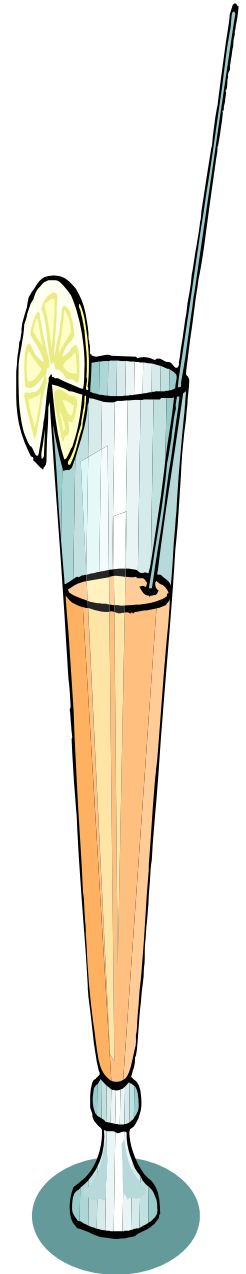
- 1 cup of mango juice
- 2 cups of pineapple juice
- 3 cups of orange juice
- A squeeze of lime juice

Mix together or shake well with ice.

Virgin Margarita

- 1 cup orange juice
- 1 cup lime juice
- 3 cups lemonade

Mix together or shake well with ice.



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Questions

1. How many cups of Orangeberry Punch does the recipe make?
2. If you wanted to make three times this amount how many cups of each ingredient would you need?
3. If you wanted to make half the original amount how many cups of each ingredient would you need?

Writing quantities as ratios

The quantities given in the recipe for Orangeberry Punch can be written as a ratio.

Orange : Cranberry : Ginger ale

1 : 2 : 6

The ratio shows that there is 1 part orange juice to 2 parts cranberry juice to 6 parts ginger ale. As long as the ingredients are kept in the same proportion, they will make the correct mixture.

Questions

1. Write the recipe for Safe Sex as a ratio.

mango : pineapple : orange
2. In the recipe for Safe Sex, one cup represents one part. How many cups of Safe Sex does the recipe make?

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Progression

The recipe for Virgin Margarita cocktail can be written as a ratio

Orange : Lime : Lemonade

1 : 1 : 3

In the ratio 1 : 1 : 3, there are $1 + 1 + 3 = 5$ parts

Suppose you want to make 1000ml of Virgin Margarita. This volume represents the total of 5 parts.

5 parts = 1000ml

To find out what volume (in ml) 1 part represents, you divide the total volume required by the number of parts in the ratio;

$1000 \div 5 = 200\text{ml}$

1 part = 200ml

So, 3 parts will be $3 \times 200 = 600\text{ml}$.

The recipe can be re-written:

To make 1000ml of Virgin Margarita

Mix together

200ml orange juice

200ml lime juice

600ml lemonade

You can check that you have calculated the quantities correctly by adding up the individual amounts:

$200 + 200 + 600 = 1000\text{ml}$

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Questions

1. Calculate the volume of each ingredient needed to make 1.5 litres of Virgin Margarita.
2. Calculate the volume of each ingredient needed to make 3.6 litres of Safe Sex.
3. If I use 3 litres of ginger ale, what volumes of cranberry juice and orange juice do I need to make Orangeberry Punch?
4. I want to make a cocktail called Toothless Shark for a party. The ratio of lime juice to grenadine to orange juice is 1 : 1 : 6. The glasses I want to serve the drinks in have a capacity of 400ml.
 - Work out the quantity of each ingredient I need to make one glass of Toothless Shark.
 - If I have 3 litres of orange juice, how many glasses of Toothless Shark can I make in total?

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Curriculum mapping and answers

Adult Numeracy



N1/L1.7 Work out simple ratio and direct proportion. Understand simple ratio as the number of parts, e.g. three parts to one part

Understand direct proportion as the same rate of increase or decrease, e.g. double, half

Understand relationship between simple ratio and fractions

N1/L2.3: Calculate ratio & direct proportion. Understand ratio written in the form 3:2

Understand how to work out the number of parts in a given ratio, and the value of one part

<http://www.excellencegateway.org.uk/page.aspx?o=sflcurriculum>

Functional Maths

Ideal for **underpinning** the following Coverage and Range statements.

L1. Solve simple problems involving ratio where one number is a multiple of the other

L2 Understand, use and calculate ratio and proportion including problems involving scale.

<http://www.ofqual.gov.uk/qualification-and-assessment-framework/89-articles/238-functional-skills-criteria>

Answers

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- How many cups of Orangeberry Punch does the recipe make? **1 cup of orange juice + 2 cups of cranberry juice + 6 cups of ginger ale = 9 cups punch.**
- If you wanted to make three times this amount how many cups of each ingredient would you need?
 $1 \times 3 = 3$ cups orange juice, $2 \times 3 = 6$ cups cranberry juice, $6 \times 3 = 18$ cups ginger ale.
- If you wanted to make half this amount how many cups of each ingredient would you need?
 $\frac{1}{2}$ cup orange, 1 cup cranberry, 3 cups of ginger.

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- Calculate the volume of each ingredient needed to make 1.5 litres of Virgin Margarita. **$200 \times 1.5 = 300$ ml orange juice, $200 \times 1.5 = 300$ ml lime juice, $600 \times 1.5 = 900$ ml lemonade. Check: $300 + 300 + 900 = 1500$ ml (1.5 litres)**
- Calculate the volume of each ingredient needed to make 3.6 litres of Safe Sex.
1 cup of mango juice : 2 cups of pineapple juice : 3 cups of orange juice : a squeeze of lime juice = 6 parts altogether (excluding the lime!). 3.6 litres = 3600 ml. $3600 \div 6 = 600$ ml per part. So, to make 3.6 litres you will need: **600ml mango, 1200 ml pineapple, 1800 ml orange (and a several large squeezes of lime). Check: $600 + 1200 + 1800 = 3600$ ml (3.6 litres)**
- If I use 3 litres of ginger ale, what volumes of cranberry juice and orange juice do I need to make Orangeberry Punch? **1 cup of orange juice + 2 cups of cranberry juice + 6 cups of ginger ale. Ginger ale is 6 parts. So 1 part = $3 \text{ litres} \div 6 = 3000 \text{ml} \div 6 = 500$ ml. So, will need **500ml orange (1 part) and 1000ml cranberry (2 parts).****
- I want to make a cocktail called Toothless Shark for a party. The ratio of lime juice to grenadine to orange juice is 1 : 1 : 6. The glasses I want to serve the drinks in have a capacity of 400ml.
 - Work out the quantity of each ingredient I need to make one glass of Toothless Shark. **$1:1:6 = 8$ parts altogether. $400 \text{ml} \div 8 = 50$ ml (1 part). So, you will need **50ml lime (1 part), 50ml grenadine (1 part), 300ml orange juice.****
 - If I have 3 litres of orange juice, how many glasses of Toothless Shark can I make in total?
Orange juice is 6 parts. So, 1 part = $3000 \text{ml} \div 6 = 500$ ml. So total volume of drink = $3000 \text{ml} + 500 \text{ml (lime)} + 500 \text{ml (grenadine)} = 4000 \text{ml}$ $4000 \text{ml} \div 400 = 10$ (400ml) glasses.