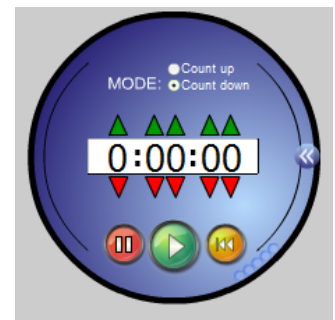#1 **a) A dirt bike with a 2-stroke engine requires 15 L of gas to be mixed with 1.5 L of oil. How much oil will you need to mix with 25 L of gas to fill up your dirt bike? Round to 1 decimal place.**

b) If the dirt bike's gas tank holds 20 L of gas. How much gas and oil will be needed to fill the tank?

#2 **If 7 cans of paint cover 210 m^2 of wall space, how many cans of paint will you need to cover 440 m^2?**

#1 **a) A dirt bike with a 2-stroke engine requires 15 L of gas to be mixed with 1.5 L of oil. How much oil will you need to mix with 25 L of gas to fill up your dirt bike? Round to 1 decimal place.**

Let oil = x

$$\frac{gas}{oil}$$

$$\frac{15}{1.5} = \frac{25}{x}$$

15x = 37.5

x = 2.5L of oil

#1   **b) If the dirt bike's gas tank holds 20 L of gas. How much gas and oil will be needed to fill the tank?**

Batch Total

Liters of gas   = 15
Liters of oil   =   1.5

Total # = 16.5

Total Ratio

Let x = gas

$$\frac{\text{liters of gas}}{\text{Total}}$$

$$\frac{15}{16.5} = \frac{x}{20}$$

$$16.5x = 300$$

$$x = 18.2$$

18.2 Liters of gas

Oil Total

Oil = 20 - 18.2
    = 1.8

1.8 Litres of oil

#2 **If 7 cans of paint cover 210 m^2 of wall space, how many cans of paint will you need to cover 440 m^2?**

Let # of cans = x

$$\frac{\text{# of cans}}{\text{area}}$$

$$\frac{7}{210} = \frac{x}{440}$$

210x = 3080

x = 14.6

15 cans of paint

Ultimate Question

Fruit Juice Recipe
2 cups pineapple juice
3 cups cranberry juice
5 cups apple juice
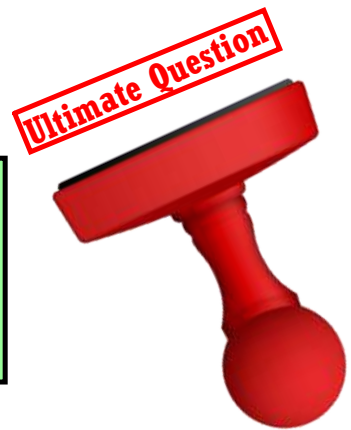
**You need to make only 4 cups of juice for a taste test.
How much of each ingredient will you need?**

Fruit Juice Recipe
2 cups pineapple juice
3 cups cranberry juice
5 cups apple juice

You need to make only 4 cups of juice for a taste test.
How much of each ingredient will you need?

Batch Total

# of pineapple = 2
# of cranberry = 3
# of apple   = 5

Total # =

Fruit Juice Recipe
2 cups pineapple juice
3 cups cranberry juice
5 cups apple juice

You need to make only 4 cups of juice for a taste test. How much of each ingredient will you need?

Batch Total	**Total Ratio**
	Let x = pineapple
# of pineapple = 2	$\dfrac{\text{\# of pineapple}}{\text{Total}}$
# of cranberry = 3	
# of apple = 5	$\dfrac{2}{10} = \dfrac{x}{4}$
Total # = 10	$10x = 8$
	$x = 0.8$

Fruit Juice Recipe
2 cups pineapple juice
3 cups cranberry juice
5 cups apple juice

You need to make only 4 cups of juice for a taste test. How much of each ingredient will you need?

Batch Total

# of pineapple = 2
# of cranberry = 3
# of apple   = 5

Total # = 10

Total Ratio

Let x = pineapple

$\dfrac{\text{# of pineapple}}{\text{Total}}$

$$\frac{2}{10} = \frac{x}{4}$$

10x = 8

x = 0.8

0.8 cups of pineapple

Total Ratio

Let y = cranberry

# of cranberry

$$\frac{3}{10} = \frac{y}{4}$$

⟶ 10y = 12

⟶ y = 1.2

1.2 cups of cranberry

Fruit Juice Recipe
2 cups pineapple juice
3 cups cranberry juice
5 cups apple juice

You need to make only 4 cups of juice for a taste test. How much of each ingredient will you need?

Batch Total

# of pineapple = 2
# of cranberry = 3
# of apple = 5

Total # = 10

Total Ratio

Let x = pineapple

$$\frac{\text{\# of pineapple}}{\text{Total}}$$

$$\frac{2}{10} = \frac{x}{4}$$

$$10x = 8$$

$$x = 0.8$$

0.8 cups of pineapple

Total Ratio

Let y = cranberry

$$\frac{\text{\# of cranberry}}{\text{al}}$$

$$\frac{3}{10} = \frac{y}{4}$$

$$10y = 12$$

$$y = 1.2$$

1.2 cups of cranberry

Apple = 4 - 0.8 - 1.2

= 2 cups

2 cups of apple

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