



## Task Title: Calculating Hair Dye Mixing Ratios

OALCF Cover Sheet – Practitioner Copy

**Learner Name:** \_\_\_\_\_

**Date Started:** \_\_\_\_\_

**Date Completed:** \_\_\_\_\_

**Successful Completion:** Yes  No

**Goal Path:** Employment  Apprenticeship

Secondary School  Post Secondary  Independence

**Task Description:** Using ratios, the learner will calculate the amounts of ingredients needed to mix hair dye in a salon.

### Main Competency/Task Group/Level Indicator:

- Understand and Use Numbers/Use measures/C3.2

### Materials Required:

- Pen/pencil and paper and/or digital device
- Calculator or digital device with calculator function (optional)

## Learner Information

When mixing hair dye, hairstylists determine the amounts of colour and developer in order to achieve the desired result.

Scan "Common Ratios".

### **Common Ratios**

Standard Colour Formula Mixture is 1 part colour : 1.5 parts developer

Super Lightener Mixture is 1 part colour : 3 parts developer

## Work Sheet

**Task 1: A hairstylist is mixing a standard colour formula mixture. He has 40 ml of colour. Calculate how much developer is needed.**

Answer:

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**Task 2: A hairstylist is mixing a super lightener mixture. She has 50 ml of super lightener. Calculate how much developer is needed.**

Answer:

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**Task 3: A hairstylist requires 200 ml total of a standard colour formula mixture. Calculate how much colour and developer are needed.**

Answer:

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**Task 4: A hairstylist has 300 ml of developer remaining. Calculate the maximum amount of standard colour formula mixture they can mix. The stylist has several packages of colour remaining.**

Answer:

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## Answers

**Task 1: A hairstylist is mixing a standard colour formula mixture. He has 40 ml of colour. Calculate how much developer is needed.**

Answer:

1 : 1.5

40 : (40 x 1.5)

40 ml : 60 ml

60 ml of developer is needed

**Task 2: A hairstylist is mixing a super lightener mixture. She has 50 ml of super lightener. Calculate how much developer is needed.**

Answer:

1 : 3

50 : (50 x 3)

50 ml : 150 ml

150 ml of developer is needed

**Task 3: A hairstylist requires 200 ml total of a standard colour formula mixture. Calculate how much colour and developer are needed.**

Answer:

1 standard colour : 1.5 developer = 2.5 total

$200/2.5 = 80$

$(1 \times 80) : (1.5 \times 80) = 200 \text{ ml total}$

80 ml standard colour : 120 ml developer = 200 ml total

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**Task 4: A hairstylist has 300 ml of developer remaining. Calculate the maximum amount of standard colour formula mixture they can mix. The stylist has several packages of colour remaining.**

Answer:

1 colour : 1.5 developer

$300/1.5 = 200$

$(1 \times 200) : 300$

$200 : 300 = 600$  ml total. This is the maximum amount of mixture.

### Performance Descriptors

Levels	Performance Descriptors	Needs Work	Completes task with support from practitioner	Completes task independently
C3.2	calculates using numbers expressed as whole numbers, fractions decimals, percentages and integers			
	understands and uses ratio and proportion			
	chooses and performs required operation(s); may make inferences to identify required operation(s)			
	selects appropriate steps to solutions			
	interprets, represents and converts measures using whole numbers, decimals, percentages, ratios and simple, common fractions (e.g. $\frac{1}{2}$ , $\frac{1}{4}$ )			
	uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation)			

This task: Was successfully completed  Needs to be tried again

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Learner Comments:

Instructor (print):

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Learner (print):

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