

Task Title: Calculating Hair Dye Mixing Ratios

# OALCF Cover Sheet – Practitioner Copy

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

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

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

| **Goal Path:** | Employment | Apprenticeship |
| --- | --- | --- |
| Secondary School | Post Secondary | Independence |

**Successful Completion:**  Yes No

**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:

# **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

Answer:

# **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

Answer:

# **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**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:

# **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

# 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 x 80) : (1.5 x 80) = 200 ml total

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

**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 x 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. ½, ¼)  |  |  |  |
|  | 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

Learner Comments:

Instructor (print): Learner (print):

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**