

Task Title: Converting Between Imperial and Metric Measurements

# 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:** The learner will measure objects and convert between Imperial and metric measurements.

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

* Find and Use Information/Interpret documents/A2.1
* 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
* 3-inch bolt
* Measuring Tape with both metric and Imperial measurements (e.g. measuring tape used in sewing)
* Tape Measure (retractable metal type) with both metric and Imperial measurements (e.g. measuring type used in construction trades)

# Notes for Instructors/Practitioners

Pre-measure the desk the learner will be measuring for Task 2 so you have the answer.

# Learner Information

# Machinists and other tradespeople who measure materials often need to convert between metric and Imperial measurements.

Scan the “Conversion Table”.

**Conversion Table**

# of Centimeters x 0.39 = Inches

# of Inches x 2.54 = Centimeters

# Work Sheet

**Task 1: A machinist needs to measure the length of a bolt to make sure it does not show on the underside of a piece of furniture. Using the tape measure, measure the bolt provided twice, using metric and Imperial measurements.**

Answer:

Length of bolt = \_\_\_\_\_\_\_\_\_\_ (metric)

Length of bolt = \_\_\_\_\_\_\_\_\_\_ (Imperial)

**Task 2: Measure the height, width and length of a desk in the room you are currently sitting in. Using the tape measure, measure the desk twice using both forms of measurement (metric and Imperial).**

Answer:

Length = \_\_\_\_\_\_\_ Width = \_\_\_\_\_\_\_\_ Height = \_\_\_\_\_\_\_\_\_ (metric)

Length = \_\_\_\_\_\_\_Width = \_\_\_\_\_\_\_\_\_Height = \_\_\_\_\_\_\_\_ (Imperial)

**Task 3: Rafael is renting a pair of skis that are 209 cm long. Write the length of the skis as a decimal number of metres or as metres and centimetres.**

Answer: Length in metres: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Task 4: Pablo measured his ski pole to be 1.15m long. Write this length as centimetres.**

Answer: Length in centimetres: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Task 5: Mary is buying a gold chain. She needs to measure it to make sure it will fit around her neck and reach mid-chest. Using the measuring tape, measure the length on yourself, using metric and Imperial measurements.**

Answer:

Length of chain = \_\_\_\_\_\_\_\_\_\_ (metric)

Length of chain = \_\_\_\_\_\_\_\_\_\_ (Imperial)

**Task 6: Julio has two lengths of copper tubing. One is 6ft. 3in. long and the other is 2ft. 10 in. long. What is the combined length of the copper tubing in inches? What would that measurement be in metric measure?**

Answer:

Combined Length of tubing = \_\_\_\_\_\_\_\_\_\_ (Imperial)

Combined Length of tubing = \_\_\_\_\_\_\_\_\_\_ (metric)

**Task 7: Stephanie used a metric ruler to measure two tables. The larger table is 73cm 2mm wide. The smaller table is 62cm 9mm wide. Stephanie needs to fit the two tables together and wants to find the combined width of the tables. What would that measurement be in metric measure?**

Answer:

Width of tables = \_\_\_\_\_\_\_\_\_\_ (metric)

Width of tables = \_\_\_\_\_\_\_\_\_\_ (Imperial)

# Answers

**Task 1: A machinist needs to measure the length of a bolt to make sure it does not show on the underside of a piece of furniture. Using the tape measure, measure the bolt provided twice, using metric and Imperial.**

Answer:

Length of bolt = 7.62cm (metric)

Length of bolt = 3 inches (Imperial)

Note: The answers will be different if the bolt provided to the learner to measure is different than 3 inches.

**Task 2: Measure the height, width and length of a desk in the room are currently sitting in. Using the tape measure, measure the desk twice using both forms of measurement (metric and Imperial).**

Answers will vary depending on the size of the desk measured.

**Task 3: Rafael is renting a pair of skis that are 209 cm long. Write the length of the skis as a decimal number of metres or as metres and centimetres.**

Answer: Length in metres: 209 cm = 2.09 metres or 2 metres 9 centimeters

**Task 4: Pablo measured his ski pole to be 1.15m long. Write this length as centimetres.**

Answer: Length in centimetres: 1.15 m = 115 cm

**Task 5: Mary is buying a gold chain. She needs to measure it to make sure it will fit around her neck and reach mid-chest. Using the measuring tape, measure that length on yourself, using metric and Imperial measurements.**

Answer: Answers will vary depending on each learner’s measurement.

**Task 6: Julio has two lengths of copper tubing. One is 6ft. 3in. long and the other is 2ft. 10 in. long. What is the combined length of the copper tubing in inches? What would that measurement be in metric measure?**

Answer:

Combined Length of tubing (Imperial) = 9 feet, 1 inch = 109 inches OR

Decide to convert both measurements into inches first.

6 ft = 72 inches + 3 inches = 75 inches

2 ft = 24 inches + 10 inches = 34 inches

75 inches + 34 inches = 109 inches

Combined Length of tubing (metric) = 109 inches x 2.54 = 276.86 cm

**Task 7: Stephanie used a metric ruler to measure two tables. The larger table is 73cm 2mm wide. The smaller table is 62cm 9mm wide. Stephanie needs to fit the two tables together and wants to find the combined width of the tables. What would that measurement be in metric measure?**

Answer:

Width of tables (metric) = 135 cm, 11 mm = 136.1 cm OR

Decide to convert both measurements into mm (millimetres).

73 cm = 730 mm + 2 mm = 732 mm

62 cm = 620 mm + 9 mm = 629 mm

732 mm + 629 mm = 1361 mm or 136.1 cm

Width of tables = 136.1 x 0.39 = 53.08 inches (Imperial)

# Performance Descriptors

| Levels | Performance Descriptors | Needs Work | Completes task with support from practitioner | Completes task independently |
| --- | --- | --- | --- | --- |
| A2.1 | scans to locate specific details |  |  |  |
|  | interprets brief text and common symbols |  |  |  |
|  | locates specific details in simple documents, such as labels and signs |  |  |  |
| C3.2 | calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers |  |  |  |
|  | makes estimates |  |  |  |
|  | converts units of measurement within the same system and between systems |  |  |  |
|  | chooses and performs required operations, may make inferences to identify required operations |  |  |  |
|  | selects appropriate steps to solutions |  |  |  |
|  | interprets, represents and converts measures using whole numbers, decimals, percentages, ratios and simple, common fractions |  |  |  |
|  | 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):

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