Task Title: Converting Between Imperial and Metric Measurements

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: 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

6

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)

7

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):

_____   _____