



**Task Title: Calculating Tolerances
in Manufacturing and Construction**

OALCF Cover Sheet – Learner 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 calculate measurement parameters based on tolerance.

Main Competency/Task Group/Level Indicator:

- Communicate Ideas and Information/Complete and create documents/B3.2a
- 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

Learner Information

People working in skilled trades often need to determine whether a measurement is within acceptable parameters. This is called tolerance. This includes things like the length or width of materials, how flat a surface is, or angles of joints used for construction. Tolerance allows for small variations while ensuring safety and quality standards are met.

Work Sheet

Task 1: Calculate the minimum and maximum measurements based on the tolerance given. Complete the chart.

Measurement	Tolerance	Minimum	Maximum
3.5 mm	+/- 0.02 mm		
28.01 inches	+/- 0.03 inches		
3.375 inches	+/- 0.002 inches		
4.63 inches	+/- 0.1 inches		

Task 2: Determine whether each given measurement falls within tolerance. Complete the chart.

Tolerance	Minimum	Maximum	Given Measurement	Is this measurement within tolerance?
3.450 mm +/- 0.05 mm			3.453 mm	
12.000 mm +/- 0.003 mm			12.098 mm	
22.01 +/- 0.01 mm			22.00 mm	
18.874 +/- 0.005			18.880 mm	