

Task Title: Understanding Calculations Used by Machinists

# 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 calculate distances between holes in steel plates.

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

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

**Materials Required:**

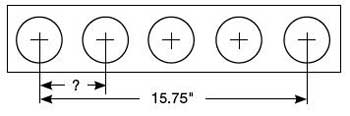
* Pen/pencil and paper and/or digital device
* Calculator or digital device with calculator function

# Learner Information

Machinists use geometry and make calculations to interpret drawings and cut metal parts into precise shapes. They also measure, calibrate, and check machine tools.

# Work Sheet

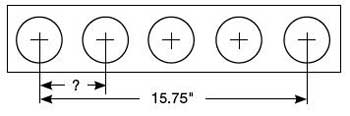
**Task 1: Two holes are evenly spaced in a steel plate. The centre-to-centre distance between the holes is 2.945 inches. The distance between the centre of each hole and the edge of the steel plate is 2.323 inches. Calculate the total length of the steel plate.**



Answer:

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

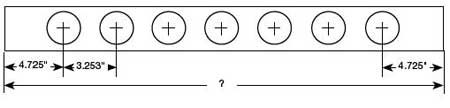
**Task 2: Five holes are evenly spaced in a steel plate. Calculate the centre-to-centre distance between two holes.**



Answer:

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

**Task 3: Seven holes are evenly spaced in a steel plate. The centre-to-centre distance between two holes is 3.253 inches. The distance from the edges of the steel plate to the centre of the first hole on each side is 4.725 inches. Calculate the total length of the steel plate.**

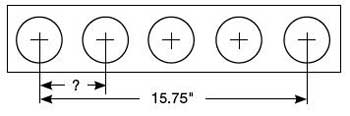


Answer:

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

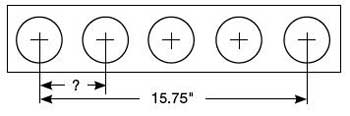
# Answers

**Task 1: Two holes are evenly spaced in a steel plate. The centre-to-centre distance between the holes is 2.945 inches. The distance between the centre of each hole and the edge of the steel plate is 2.323 inches. Calculate the total length of the steel plate.**



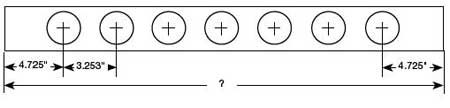
Answer: 2.945 + 2.323 + 2.323 = 7.591 inches

**Task 2: Five holes are evenly spaced in a steel plate. Calculate the centre-to-centre distance between two holes.**



Answer: 15.75 / 4 = 3.9375 inches between each hole

**Task 3: Seven holes are evenly spaced in a steel plate. The centre-to-centre distance between two holes is 3.253 inches. The distance from the edges of the steel plate to the centre of the first hole on each side is 4.725 inches. Calculate the total length of the steel plate.**



Answer:

(3.253 x 6) + (4.725 x 2) = 28.968 inches  
The steel plate is 28.968 inches long.

# 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 |  |  |  |
|  | chooses and performs required operation(s); may make inferences to identify required operation(s) |  |  |  |
|  | selects appropriate steps to reach 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):

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