

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:

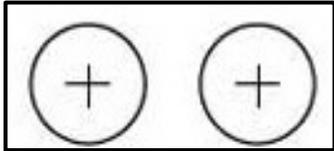
- Pen/pencil and paper and/or digital device
- Calculator or digital device with calculator function

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.

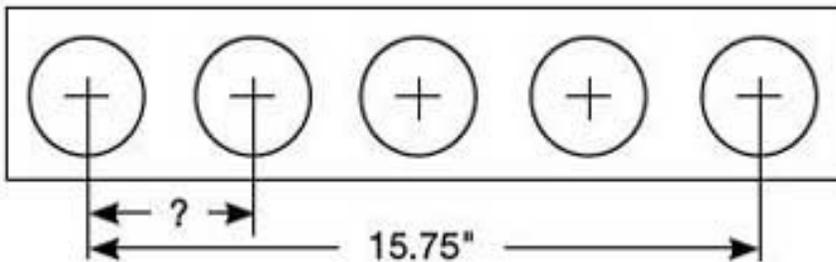
Work Sheet

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.



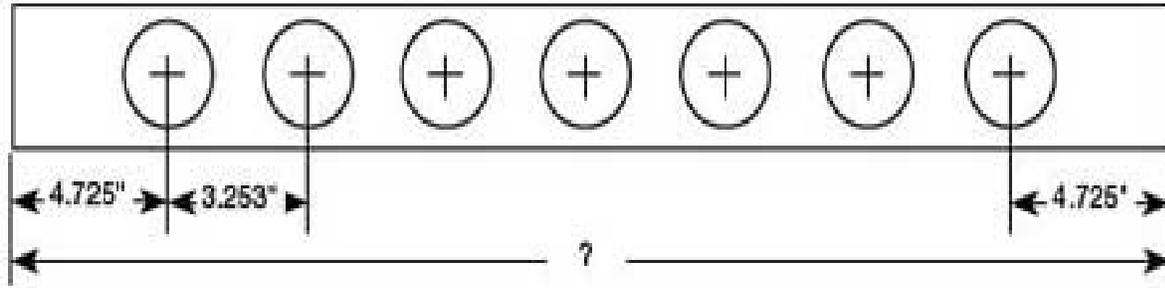
Answer:

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



Answer:

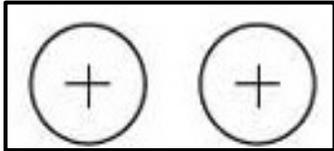
Task 3: Seven holes are evenly spaced in a steel plate. The centre-to-centre distance between two holes is 3.253 inches. The distance from the edges of the steel plate to the centre of the first hole on each side is 4.725 inches. Calculate the total length of the steel plate.



Answer:

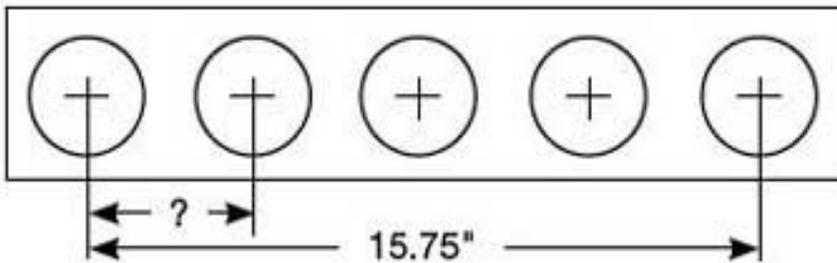
Answers

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.



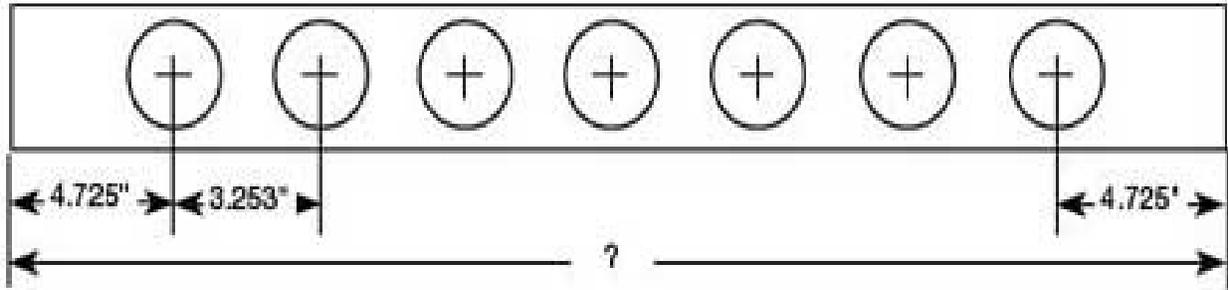
Answer: $2.945 + 2.323 + 2.323 = 7.591$ inches

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:

$$(3.253 \times 6) + (4.725 \times 2) = 28.968 \text{ inches}$$

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. $\frac{1}{2}$, $\frac{1}{4}$)			
	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

Task Title: UnderstandingCalculationsUsedByMachinists_EA_C3.2

Learner Comments:

Instructor (print):

Learner (print):
