

9 Tests comprehension of G71 and G70 roughing and finishing

Name: _____

Date: _____

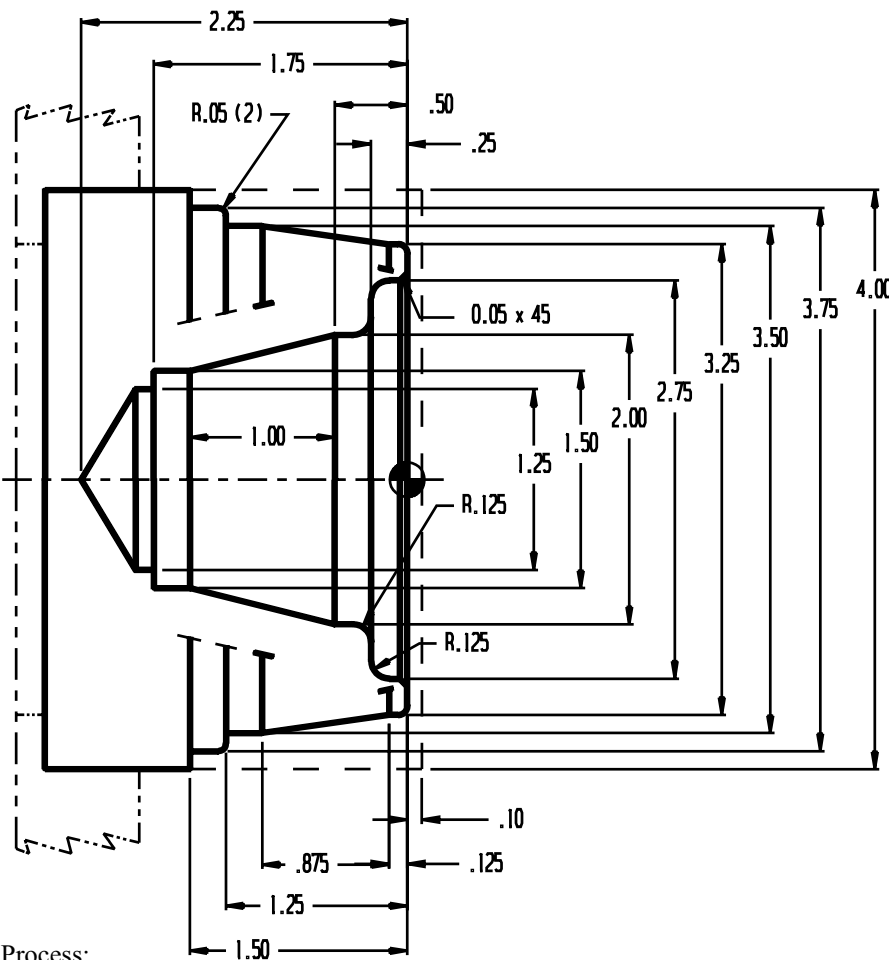
Score (100 possible):

Instructions: *First*, study the print and process to gain an understanding of what the program will be doing. *Second*, study the tool paths and fill in the coordinate sheet. Note that we are not supplying you with tool paths for finish boring and finish turning, since you'll be using the G70 cycle and basing movements on the values calculated for G71. While you are missing two or three points for the finish turning operation, you should be able to easily determine these points on your own. *Third*, write the program for this workpiece using G71 to rough turn and bore and G70 to finish turn and bore. Remember to use tool nose radius compensation for the finishing operations.

Coordinate sheet:

Point	X	Z
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		

Print:



Process:

Seq.	Description	Tool	Station	Speed	Feedrate
1	Rough face and turn (leave 0.06 on dia., 0.005 on faces)	80 degree diamond	1	500 sfm	0.012 ipr
2	Drill 1.25 hole	1-1/4 drill	2	270 rpm	0.009 ipr
3	Rough bore (leave 0.06 on dia, 0.005 on face)	1-1/4 rough boring bar	3	450 sfm	0.008 ipr
4	Finish bore (tool has 0.031 nose radius)	1-1/4 finish boring bar	4	500 sfm	0.005 ipr
5	Finish face and turn (tool has 0.031 nose radius)	80 degree diamond	5	600 sfm	0.007 ipr