

REVIEW QUESTIONS

16.1) What type of view is used to show the true size and shape of features not parallel to any principle views?

16.2) Draw the sectional view passing through points A-A in Figure Q16-1.

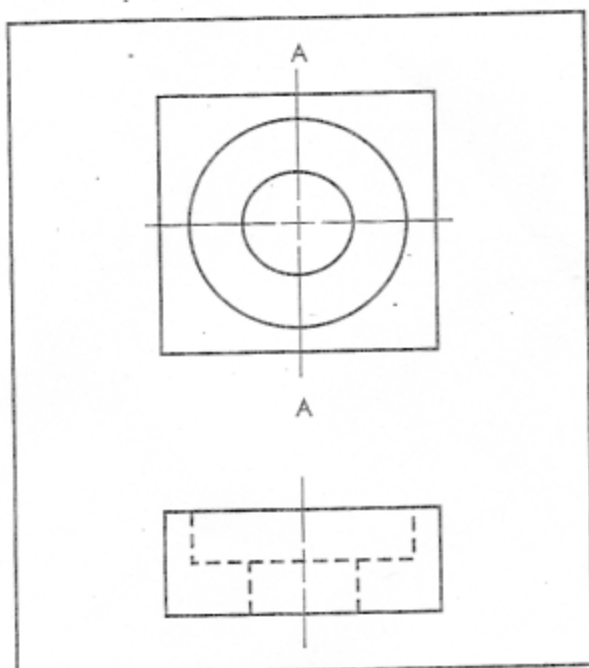


Figure Q16-1. Question 16.2.

16.3) The part in Figure Q16-2 must be manufactured so that the location of the top surface of each step is accurately located with respect to the edge 1-2. What type of dimensioning should be used?

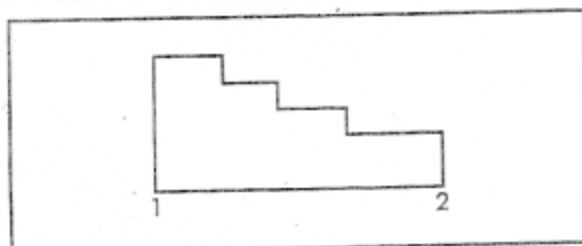


Figure Q16-2. Question 16.3.

16.4) A 1 in.-diameter pin is placed in a 1.3 in.-diameter hole. The dimensions of both the pin and the hole may vary ± 0.1 in. What is the allowance?

16.5) Is the American National Standard system based on shafts, holes, or both?

16.6) Interpret the symbols in the following IT designation: 50f6.

16.7) A dimension may vary between 0.505 and 0.509 mm. Express this information in the form of a unilateral tolerance and bilateral tolerance.

16.8) Provide proper dimensions and tolerances for a piston and a cylinder according to the following specifications. The nominal dimension of the piston is 1.000 in. The allowance in the assembly is 0.001 in. The piston and cylinder each have bilateral tolerances of 0.001 in.

16.9) Find tolerance X in Figure Q16-3 for 100% interchangeability.

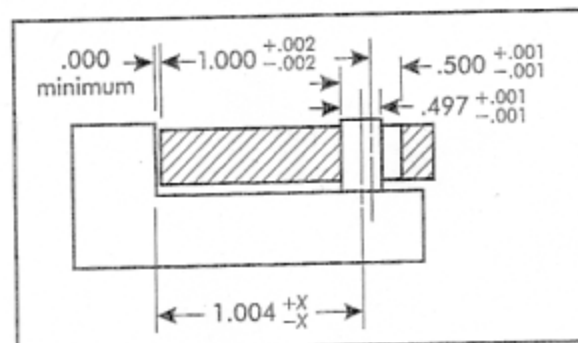


Figure Q16-3. Question 16.9 (units are inches).

16.10) Identify the indicated parts of the surface texture specification shown in Figure Q16-4.

REFERENCE

Oberg, Erik, Franklin Jones, Holbrook Horton, and Henry Ryffel. 2000. *Machinery's Handbook*, 26th Edition. New York: Industrial Press.