

Test # 1 Chapter 7 Math Applications

Completion

Complete each statement.

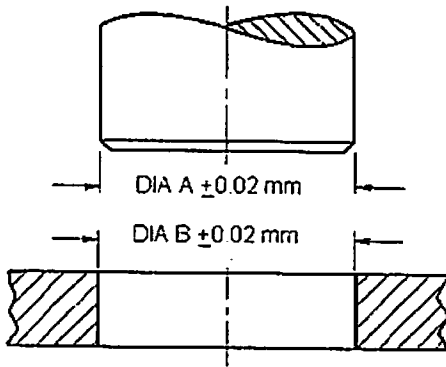
1. Add. Round the answer to the degree of precision of the least precise number.
 $96.903 \text{ mm} + 42.07 \text{ mm} - 13 \text{ mm} =$ _____
2. The number of significant digits for 5.0675 is _____.
3. The number of significant digits for 8,600 is _____.
4. The number of significant digits for 2.050 is _____.

Use this figure for the following exercises.

BASIC DIMENSIONS

DIA A = 83.62 mm

DIA B = 83.68 mm



5. The maximum diameter for DIA A is _____.
6. The minimum diameter for DIA A is _____.
7. The maximum diameter for DIA B is _____.
8. The minimum diameter for DIA B is _____.
9. The maximum clearance is _____.
10. The minimum clearance is _____.
11. In the following set of measurement numbers, 873, 0.00295, 9.07, 26.04, the most accurate number is _____.
12. The number of significant digits for 5,000,000 is _____.
13. There are _____ significant digits in 45,000.

Problem

14. What is the degree of precision and range of 6.18 inches?

Name: _____

ID: A

15. Identify the most accurate number in each set of measurement numbers for the following: 38.06, 973, 0.00256, 8.09
16. Identify the most accurate number in each set of measurement numbers for the following: 194,000, 6,200, 596.3, 1.0125

Compute the absolute error and relative error in the following problems. Round the answers to three decimal places.

17. True value = 14.720 lb, measured value = 14.580 lb
 18. True value = 8.593 cm, measured value = 8.596 cm
 19. For the value 5.37 inches:
 - a. What is the degree of precision?
 - b. What is the range?
 20. Given: true value = 16.480 lb and measured value = 16.410 lb.
 - a. Compute the absolute error.
 - b. Compute the relative error. Round the answer to three significant digits.
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