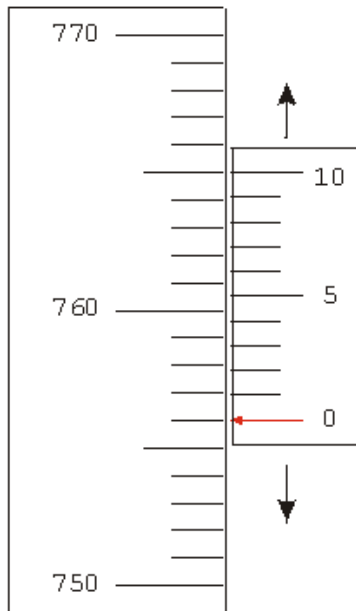


Reading A Vernier Scale

A *Vernier* allows a precise reading of some value. In **Figure A**, the Vernier moves up and down to measure a position on the Scale. The "pointer" is the line on the vernier labeled "0". Thus the measured position is almost exactly 756 in whatever units the scale has been calibrated, for example, this may be mmHg as on a barometer.

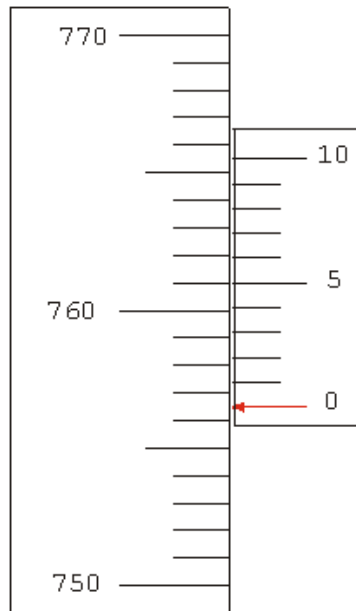
The last digit reading, i.e., the doubtful digit is read from the Vernier. In the examples below, the units are delineated to the nearest one unit. **The tenth unit is determined from the Vernier.**

Figure A



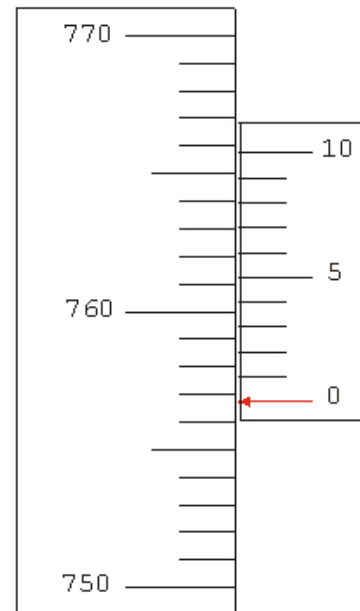
756.0

Figure B



756.5

Figure C



756.7

Line 7 on the vernier appears to be a little bit above and line 8 is a little below the corresponding line of the scale.

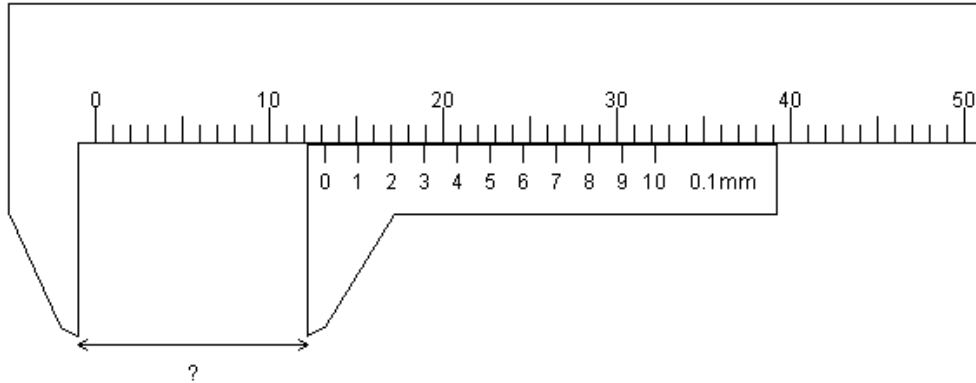
Sharp eyes might report this reading as 756.73 ± 0.02 .

This "reading error" of ± 0.02 is probably the correct error of precision to specify for measurements done with this apparatus.

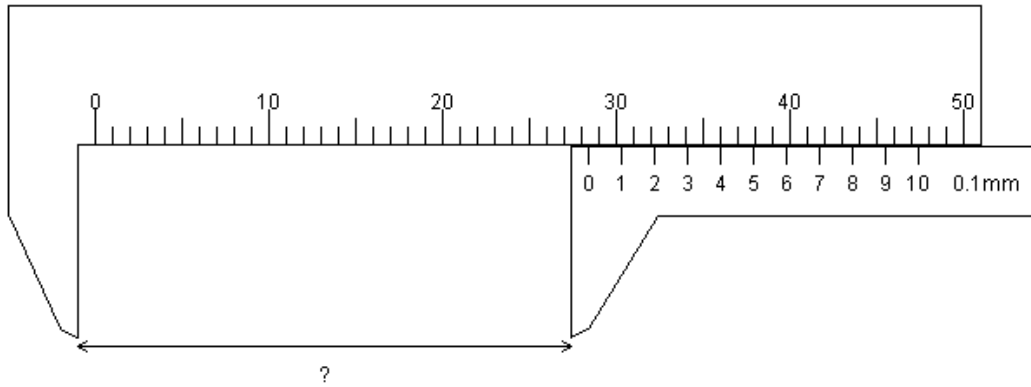
Exercises

What is the distance measured by the calipers? Record answers to the nearest 0.1 unit.

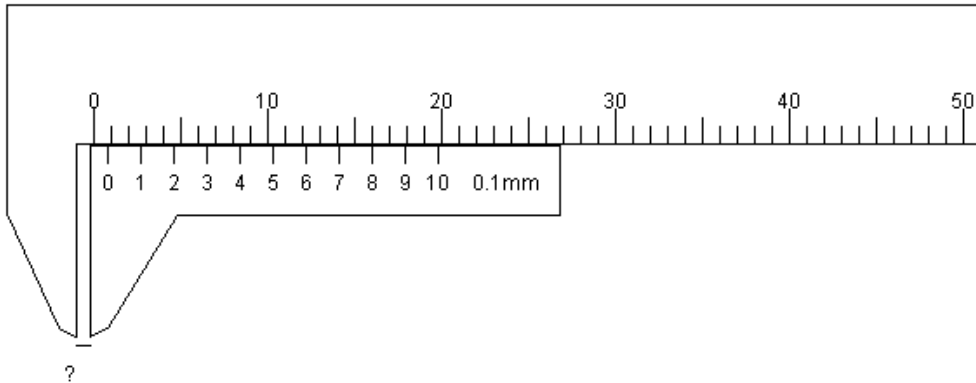
1. Distance = _____



2. Distance = _____

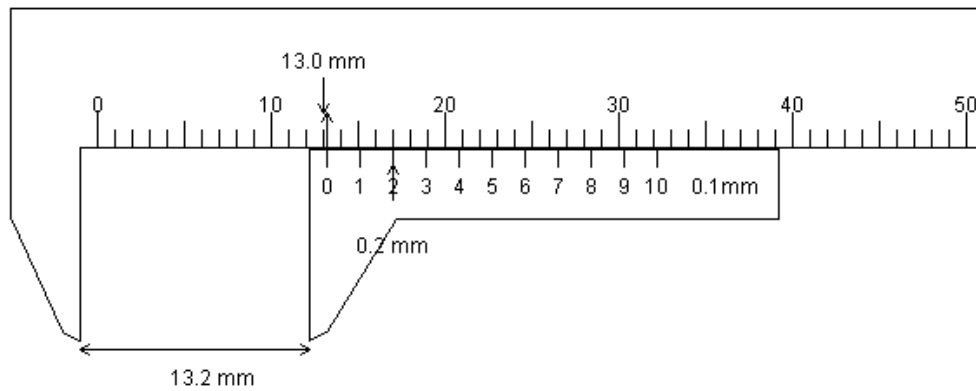


3. Distance = _____

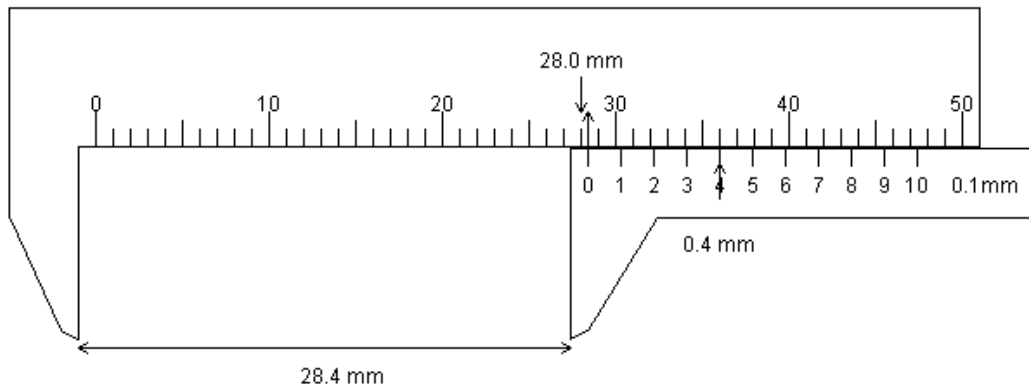


Answers

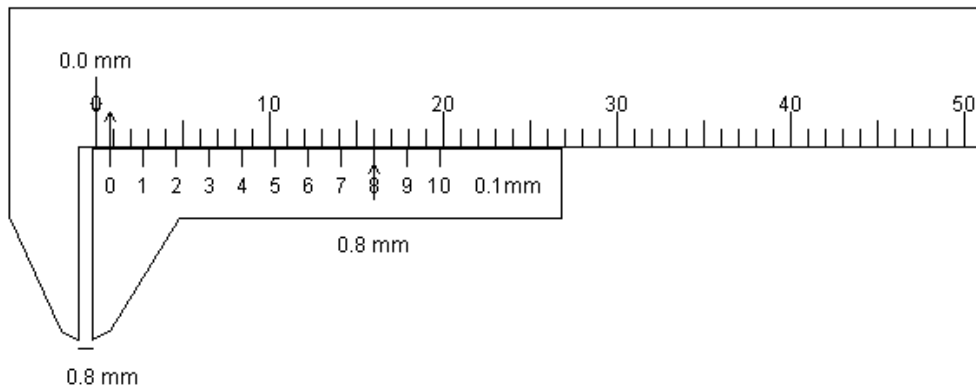
1. Distance = 13.2 mm



2. Distance = 28.4 mm



3. Distance = 0.8 mm



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