

Reading Micrometers and Calipers

Metric Micrometer

1. Count the number of whole millimeters on the barrel that are to the left of the head
2. If a 0.5mm line is visible on the bottom scale of the barrel, add 0.5 mm to the whole number from Step 1.
3. Read the number on the head that is in line with the centerline of the barrel. Multiply this number by 0.01. Add this number to the numbers you got from the previous two steps.

English Micrometer

1. Read the largest number visible on the barrel. Multiply it by 0.1.
2. Count the number of small divisions beyond the number found in Step 1. There will be 0, 1, 2, or 3 small divisions. Multiply this number by 0.025.
3. Read the number on the head that is closest to the barrel centerline and multiply it by 0.001.
4. Add the measurements from Steps 1 - 3 to get your answer.

Metric Caliper

1. Determine the number of whole millimeters by counting the number of millimeter graduations that are to the left of the 0 line on the vernier scale. *If by chance the zero line is in exact alignment with a marking on the fixed scale, write down the number of millimeters followed by a decimal point and 2 zeros.*
2. Assuming the 0 line on the vernier scale does not line up exactly with a graduation on the fixed scale, find a line on the vernier scale that most nearly lines up with a graduation on the fixed scale. If it lands on a long line, that number should be written in terms of tenths of a millimeter with a zero added in the hundredths place. If it lands on a short line, add 0.05 mm to the vernier graduation, which is on the immediate left of the short line.
3. Add the numbers from Steps 1 and 2 to determine the measurement reading.

English Caliper

1. Determine the number of whole inches and tenths of inches on the fixed scale by looking at the numbered divisions immediately to the left of the zero line of the vernier scale.
2. Count the number of small divisions on the fixed scale that are to the left of the zero vernier line. Multiply this number by 0.025.
3. If the zero line on the vernier scale does not line up exactly with a number on the fixed scale, use the vernier scale for the final part of the measurement. Find the graduation on the vernier scale that most nearly lines up with a division on the fixed scale. Multiply the number from the vernier scale by 0.001.
4. Add the numbers from Steps 1, 2, 3 to determine the measurement reading.