## 2.1 - Measuring Length

For each of the following, indicate the length of each segment as accurately as possible:


A ruler that uses inches is shown with a line segment above it.

What is the measurement to the nearest fraction of an inch?
What is the measurement to the nearest hundredth of an inch?


A ruler that uses inches is shown with a line segment above it.

What is the measurement to the nearest fraction of an inch?
What is the measurement to the nearest hundredth of an inch?


A ruler that uses centimeters is shown with a line segment above it.

What is the measurement to the nearest centimeter?
What is the measurement to the nearest millimeter?


A ruler that uses centimeters is shown with a line segment above it.

What is the measurement to the nearest centimeter?
What is the measurement to the nearest millimeter?


A ruler that uses centimeters is shown with a line segment above it.

What is the measurement to the nearest centimeter?
What is the measurement to the nearest millimeter?

## 2.2 - Number Line and Absolute Value

For each of the following, use the number line to compute the value of each statement:


A number line that goes from -5 (left) to 5 (right).


A number line that goes from -5 (left) to 5 (right).


A number line that goes from -5 (left) to 5 (right).


## 2.3 - Significant Figures, Rounding, and Tolerance

For each of the following, round to the accuracy provided:

Round 3.141529 to the nearest tenth.

Round 3.141529 to the nearest hundredth.

Round 3.141529 to the nearest thousandth.

Round 17,568 to the nearest ten.

Round 17,568 to the nearest thousand.

For each of the following, indicate if the given number is within the stated tolerance:
0.25
0.17
$0.22 \pm 0.05$
$0.11 \pm 0.008$
$1.10+0.5-0.10$
100.00
$95.5 \pm 6.0$

- within tolerance
- outside tolerance
- within tolerance
- outside tolerance
- within tolerance
- outside tolerance
- within tolerance
- outside tolerance

10
$9 \pm 1$

- within tolerance
- outside tolerance
0.009
$0.008 \pm 0.002$
- within tolerance
- outside tolerance
3.14159
$3.14 \pm 0.59$
- within tolerance
- outside tolerance
3.14159
$3.14 \pm 0.00059$
- within tolerance
- outside tolerance

