

ETME 310: Section 6 Quiz

Name: _____

ID: Number: _____

1. What are the five (5) types of Measuring performed in machining?

1. **Size**
2. **Position**
3. **Form**
4. **Surface Finish**
5. **Orientation**

2. What are the ten (10) inaccuracy factors in measuring?

1. **Feel or Pressure**
2. **Alignment to the Work Piece**
3. **Dirt & Burrs**
4. **Calibration**
5. **Parallax**
6. **Heat**
7. **Tool Wear**
8. **Damage to the Measuring Tool**
9. **Measuring Environment**
10. **Bias for a Result**

3. What is meant by the rule of 10 in measuring?

The Measuring Tool Must be 10 Times more Accurate than the Tolerance

4. Looking at three (3) of the common shop measuring tools, what is the precision of their measurement ability?

1. 6" or 12" Scale: **1/8 – 1/64 or 1/10 – 1/100**
2. Dial Calipers: **1/1,000**
3. Micrometer w/Vernier: **1/10,000**

5. When using a dial caliper, what are the 4 things that can be measured with them?

1. **Inside Measurement**
2. **Outside Measurement**
3. **Depth Measurement**
4. **Step Measurement**

6. What is a Dimension?

The Size Specified on the Part Drawing

7. What is a Tolerance?

Allowable Deviation from the Dimension

8. What is calibration and why is it important for any measuring instrument?

Assures that the Measuring Tool is Reading Properly for Precise Measurements

9. When measuring a work piece that has been heated up during machining, how can this effect the reading being taken?

Heat can Cause the Work Piece to Expand and Give a False Measurement

10. What two (2) measuring instruments can be used to measure a step or depth with precision?

Dial Calipers and Depth Micrometer