

Last Name:	
First Name:	
Class:	
Grade:	Converted to Final Grade:

Intermediate Engineering Graphics
Instructor: Edward N. Locke

Quiz 9: Tolerance

- (1) Circle all correct statements on mating dimensions and fits:
1. Dimensions that correspond in the separate drawings of the mating parts, which are needed for the accurate fitting of the parts are mating dimensions.
 2. All dimensions that agree on two mating parts are not mating dimensions.
 3. The values of two corresponding mating dimensions should be exactly the same for the mating parts to fit properly.
 4. In general, the actual values of two corresponding mating dimensions should be slightly different so as to provide the mating parts with some “space” to fit properly.
 5. Clearance fit in the assembly of mating parts results when there is a positive allowance or difference between the largest shaft and the smallest hole, and in general, allows the mating parts to be “comfortably” assembled or disassembled.
 6. Interference fit allows the mating parts to be assembled “tightly”.
 7. In a basic shaft system of fits, the shaft size is the basic size; and for an interference fit, the allowance is added to the basic shaft size to come up with the size for the hole.
 8. In a basic hole system of fits, the hole size is the basic size; and for a clearance fit, the allowance is subtracted from the basic hole size to come up with the size for the shaft.
- (2) If among the two mating parts, the limits of size for the shaft are 1.748 and 1.746, the limits of size for the hole are 1.752 and 1.750, then, the nominal size for both shaft and hole is
1. 1.748.
 2. 1.752.
 3. 1.750.
- (3) The dimension figure $1.500 \pm .002$ is an example of
1. Allowance.
 2. Unilateral tolerance.
 3. Bilateral tolerance.
 4. Limits of size.
- (4) In drawings containing limit dimensioning, you should
1. Give baseline dimensioning from one common surface.
 2. Always give a complete chain of tolerance dimensions plus an overall tolerance dimension so as to allow one interpretation only.
 3. Never give a complete chain of tolerance dimensions and also an overall tolerance dimension.
- (5) Write down the limits of size for the dimension figure $1.500 \pm .002$:
1. High limit:
 2. Low limit: