

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

Intermediate Engineering Graphics
Instructor: Edward N. Locke

Quiz 7: Principles of Design and Working Drawings

- (1). Circle all correct statements about product design:
1. Good product design depends on the talent of a few good engineers and the support from their bosses.
 2. Good product design is the result of well coordinated team efforts involving contribution from engineers, designers, marketing professionals and others, using empirical as well as scientific methods.
 3. If you are the Chief Executive Officer or the principle owner of the company, you can order your engineers and designers to design whatever you want because you are the boss and have the perfect legal right to do so.
 4. Even though you are the owner of the company, you should not order your engineers and designers to design whatever you want because in the final analysis, you are not the boss at all but a humble servant of the highly competitive domestic and/or global market.
- (2). Circle all correct statements about use of fillets and rounds in product design:
1. Fillets and rounds do not need to be shown on the drawings because highly experienced machinists will be solely responsible for making them with leather and wax stripes.
 2. Fillets and rounds are used to strengthen casting metal parts due to the arrangement of crystals of cooling metal which tend to be perpendicular to the outside surface.
 3. They are used simply because they look nice.
 4. The larger the radius of fillets and rounds, the stronger the casting parts and the heavier load they can safely carry.
- (3). Circle all correct statements about use of stages in product design:
1. In the stage of market investigation, all possible design solutions are carefully evaluated.
 2. In the stage of concept ideation, as many as possible concepts are generated in an unrestricted manner called “brainstorming” and communicated with speech, writing, and sketches, etc.
 3. In the stage of compromise solution, all ideas are evaluated carefully in a collective team environment and in a well-organized, tightly-disciplined, orderly and strictly official manner. Engineers and designers as well as CEOs and owners of the company must all humbly submit themselves to the laws of physics, chemistry, production process, market conditions and consumer expectations.
 4. Designing and making all parts in your own facilities is more cost-effective than using standard parts made by a third party, because you make all the profits for yourselves and nobody can share profit with you.
- (4). Circle all correct statements about assembly drawings:
1. All information about objects, including hidden lines and centerlines, must be shown on assembly drawings.
 2. Assembly drawings are sometimes called “top drawings” because they are placed on top of a group of other drawings of parts called a “family of drawings”.
 3. Assembly drawings never include sectional views.
 4. On a assembly drawing, a clamp should always be shown in a closed position.