

Developing Design Solutions

Name _____ Period _____
Date _____ Score _____

Chapter 10 Quiz

True/False: If a statement is true, write *True* in the blank. If a statement is false, write *False* in the blank.

- _____ 1. When developing preliminary solutions to a technological problem, one must use convergent thinking.
- _____ 2. There is not always one "best" solution because consumers have different needs and different amounts of money to spend.
- _____ 3. The final design solution may not always be one of the preliminary design solutions.
- _____ 4. A two-point perspective drawing is constructed much like an isometric drawing.
- _____ 5. System design deals with the arrangement of components to produce a desired result.
- _____ 6. When brainstorming, the group should carefully monitor the quality of ideas produced.
- _____ 7. Isometric sketches are used when the top, sides, and front are equally important.

Multiple Choice: Choose the best answer and write the corresponding letter in the blank.

- _____ 8. Which of the following methods of developing preliminary solutions divides the problem into major segments and subparts?
 - a. "What if" scenarios
 - b. Brainstorming
 - c. Classification
 - d. None of the above
- _____ 9. As related to brainstorming, the concept of synergism is that:
 - a. the sum of ideas generated by people working alone is greater than the sum of ideas generated by individuals working in a group.
 - b. the number of ideas generated by individuals working in a group is usually greater than the number generated by the individuals working alone.
 - c. individuals will produce the same number of ideas whether they work in a group or alone.
 - d. None of the above.
- _____ 10. Which type of sketch communicates shape and proportion but not size?
 - a. Rough sketch
 - b. Detail sketch
 - c. Dimensioned sketch
 - d. Isometric sketch
- _____ 11. Which type of sketch provides the information needed to build a model of the project?
 - a. Refined sketch
 - b. Rough sketch
 - c. Perspective sketch
 - d. Detailed sketch

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Name _____

- _____ 12. Which type of sketch directly shows the front view of a product?
- a. Oblique sketch
 - b. Perspective sketch
 - c. Isometric sketch
 - d. Both a. and c.
- _____ 13. Which type of information contained in a drawing communicates the dimensions of the product?
- a. Geometry information
 - b. Size information
 - c. Location information
 - d. Both a. and b.

Short Answer: In the space provided, write a brief answer to each of the following questions.

14. What is the difference between system design and product design?

15. List the three factors that a product must be designed to satisfy.
