

Sections (page 339) **AST**

4. What is a section? *A section is a partial representation of an object that presents only the object's surface on a cutting plane line.*
5. What are the two ways to represent a section in a technical drawing? *We can use a revolved section or a removed section.*

Dimensioning (pages 339 to 341)

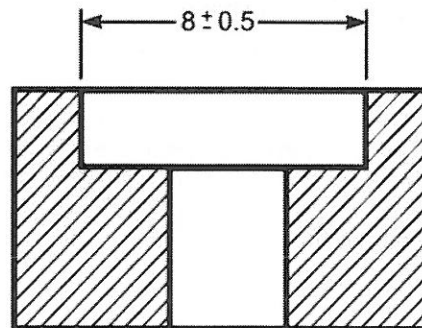
6. What are the two types of sections used in technical drawing? *The revolved section and the removed section. (This question overlaps with Question 5.)*
7. What are the two types of lines used for labelling length dimensions? *Dimension lines and extension lines*
8. Indicate whether the following statements are true or false:
 - a) The dimension lines should be outside the part's outline. *True*
 - b) The extension lines should be 5 mm from the drawing. *False. They should be 2 mm from the outline of the object.*

- c) The longest dimensions should be as close as possible to the part. *False. The smallest dimensions should be closest to the object.*
- d) It is necessary to write the measurements of hidden lines. *False. The measurements of hidden lines should not be indicated.*

Tolerances (pages 341 and 342) **AST**

9. Define tolerance. *Tolerance is the total deviation permissible between the actual dimensions of a part and the corresponding dimensions that appear on the technical drawing.*
10. Among the following measurements, which respects the indicated tolerance on the part in the illustration?
 - a) 7.4 mm
 - b) 8.8 mm
 - c) 8.2 mm

Answer:
c) 8.2 mm



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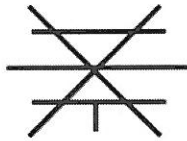
Diagrams and Symbols (pages 343 to 349)

1. In each of the following cases, indicate whether the statement applies to the design plan, the plan for manufacturing of components or to both:
 - a) It is produced freehand. *Design plan*
 - b) It is not necessarily drawn to scale. *Design plan*
 - c) It indicates the specific materials and dimensions of the components. *Plan for manufacturing of components*
 - d) It is designed to explain the forces and motions involved in an object's functioning. *Design plan*

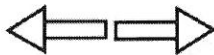
- e) It shows all of an object's parts.
Both
- f) It represents the links between the parts. *Plan for manufacturing of components*
- g) It is produced with drawing instruments. *Plan for manufacturing of components; the design plan is also usually produced with drawing instruments.*
- h) It is made to scale. *Design plan; the design plan can be drawn to scale, but it is not mandatory.*
- i) It shows how to build an object. *Plan for manufacturing of components*

2. Draw the standard symbol associated with the following concepts:

a) Complete link



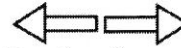
b) Tension force



c) Bidirectional rectilinear translation



3. Which concepts are the following standard symbols associated with?



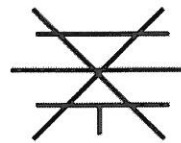
a) Tension force



b) Bidirectional rectilinear translation



c) Toggle switch



d) Complete link

Section 2 • Engineering

Student textbook, page 371

Basic Mechanical Functions (pages 355 to 358)

1. Name the five typical functions in mechanics. *Link, guiding control, lubrication, seal and support*
2. What is a mechanism? Give an example. *A mechanism is a part or substance having a specific function.*
3. Describe the four characteristics of the links in each of the following examples:
 - a) A table and its four legs connected with screws *Indirect, removable, rigid, complete*

- b) A pair of scissors *Indirect, non-removable, rigid, partial*
- c) A pen and its cap *Direct, removable, rigid, complete*

Motion Transmission Systems (pages 358 to 366)

4. Explain motion transmission. *Motion transmission is a system's ability to transmit motion from one part of an object to another.*
5. A motion transmission system always involves three types of mechanisms. Name and define each of these mechanisms.