Name: _____ Group: _____ Date: _____

Checkup • Chapter 11

1 Communicating with symbols

(pp. 336–337)

1. What are the two types of drawings most commonly used in technology?

_____ _____

2. What is technology?

_____

_____

_____

_____

_____

_____

_____

2 Lines and geometry in technical drawings

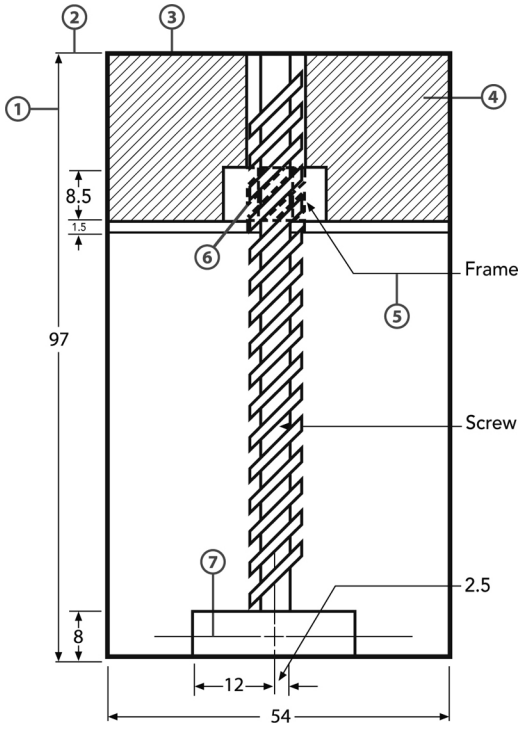
(pp. 337–342)

3. At right is a cross-sectional view of a deodorant stick.

In the table on the next page:

a) Give the name of the basic line indicated by each number.

b) Give the function of these basic lines in the diagram.



Name: _____ Group: _____ Date: _____

NUMBER	TYPE OF LINE	FUNCTION

c) Two of the basic lines discussed in Chapter 11 are not in this drawing. Name them and describe their function.

- _____
- _____

Name: _____ Group: _____ Date: _____

4. Geometric lines can be made using manual drafting instruments.

a) What are the main instruments for drafting?

_____

_____

_____

_____

b) Three types of straight lines can be made with geometric lines. What are they?

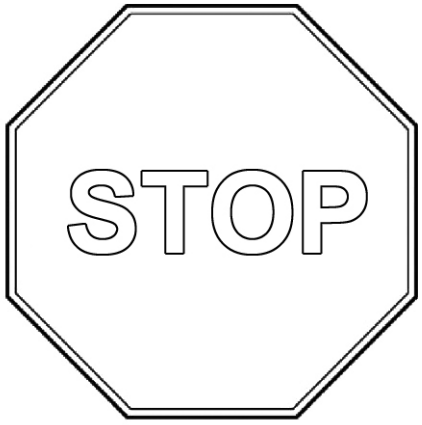
- _____
- _____
- _____

c) Name two drafting instruments that are used to draw circles.

- _____
- _____

5. Look at these two representations of a stop sign. Which one is a sketch? Explain your answer.

1



2

_____

_____

_____

Name: _____ Group: _____ Date: _____

3 Projections and their use in technical drawings *(pp. 343–351)*

6. Projections are different ways to draw an object on a two-dimensional surface.

a) Name two projections in which the visual rays are perpendicular to the sheet of paper.

- _____
- _____

b) What name is given to these two projections?

_____

7. An object can be drawn from six different angles.

a) What are these six views?

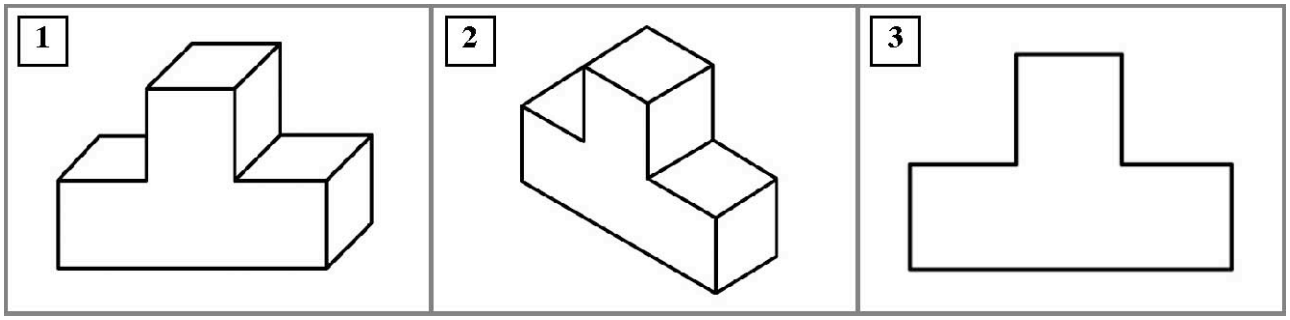
_____ _____ _____

_____ _____ _____

b) Which views are conventionally used when drawing a multiview projection of an object?

_____

8. Look at these three drawings of the same object.



a) Which projection was used for each drawing?

1 _____

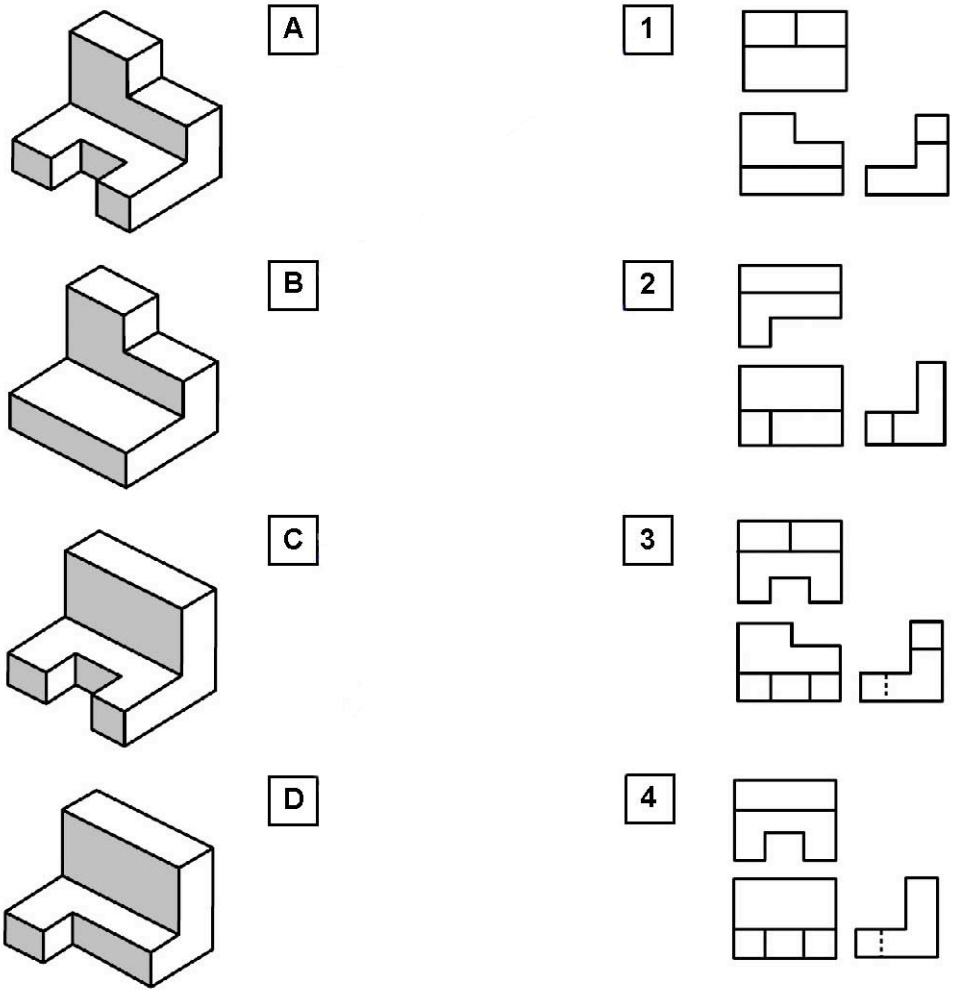
2 _____

3 _____

b) Which ones are perspective drawings?

_____

9. Match the isometric projections on the left with their multiview projections on the right.



4 What's in an engineering drawing? *(pp. 351–355)*

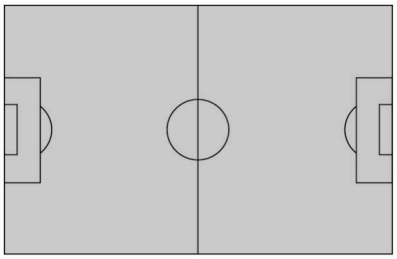
10. Jonathan is building a model car. He is reducing all of the measurements 40 times.

a) What scale is he using? _____

b) How would you indicate that scale? _____

c) The car he has chosen measures four metres in length. What will the length of the finished model be? Give your answer in millimetres. _____

11. The following drawing is a reproduction of a soccer field with a scale of 1:2000. The World Cup soccer finals are played on fields with the same dimensions. Calculate the width and the length of the soccer field using its representation to scale.



_____

_____

_____

_____

_____

_____

12. Look at the drawing at right. (The measurements given are in mm.)

a) What is the length of the skateboard?

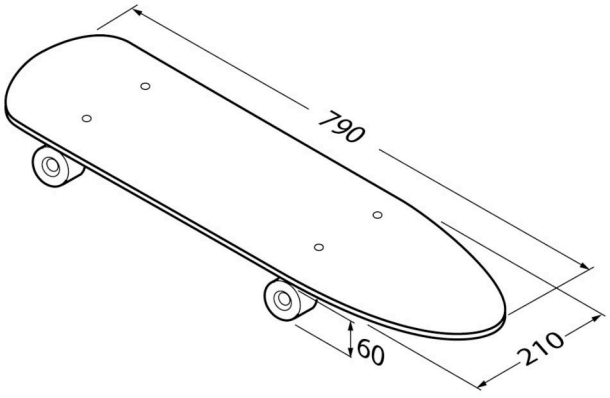
_____

b) What is its width?

_____

c) What is the diameter of each wheel?

_____

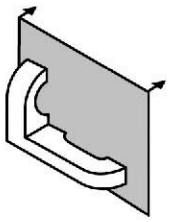


Name: _____ Group: _____ Date: _____

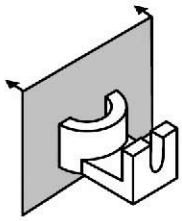
AST question only

13. What is the name of the maximum possible difference between a measurement as specified on a drawing and the real-life measurement? _____

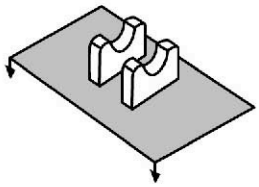
14. Match each object on the left to its corresponding cross-sectional view on the right.



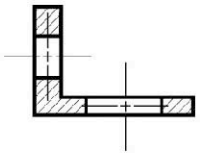
A



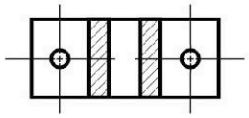
B



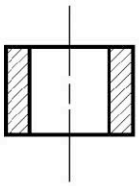
C



1



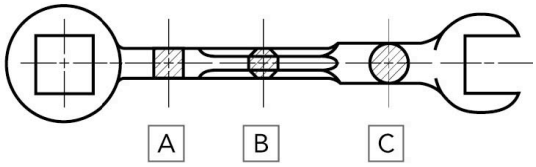
2



3

AST question only

15. Look at the drawing of a wrench at right.



a) Which section shows that the handle of the wrench has an octagonal shape?

_____

b) What is the shape of the handle indicated in section C? _____

c) Are the sections in the drawing aligned or offset? Explain your answer.

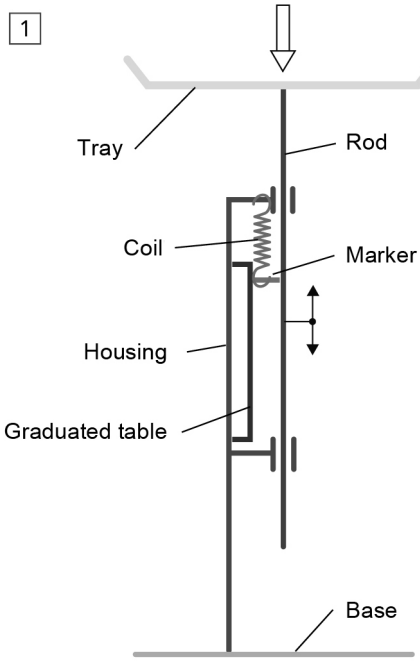
_____

_____

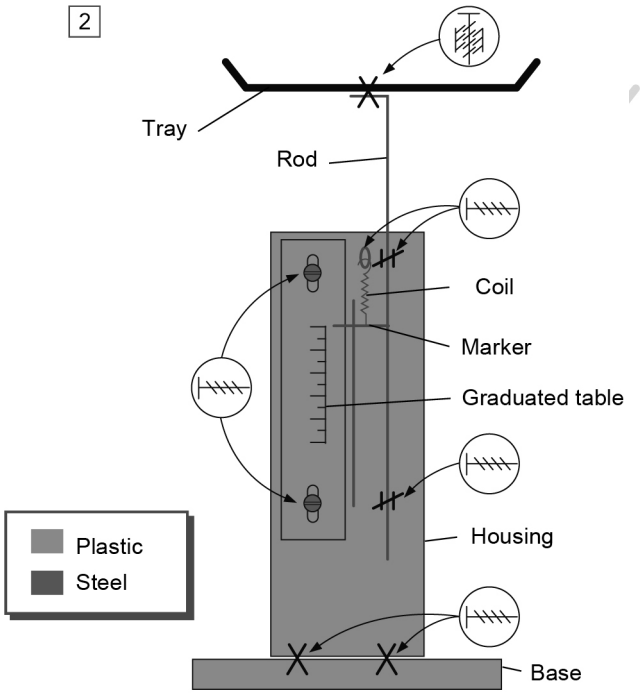
5 Diagrams

(pp. 355–359)

16. Look at the following design plan and technical diagram of a kitchen scale.



Design plan
for a kitchen scale



Technical diagram
of a kitchen scale

a) On which part of the scale is force exerted? _____

b) In total, how many screws were used to make this scale? _____

c) What kind of movement can the rod make?

_____

d) Once force has been removed, what allows the rod to return to its initial position?

_____