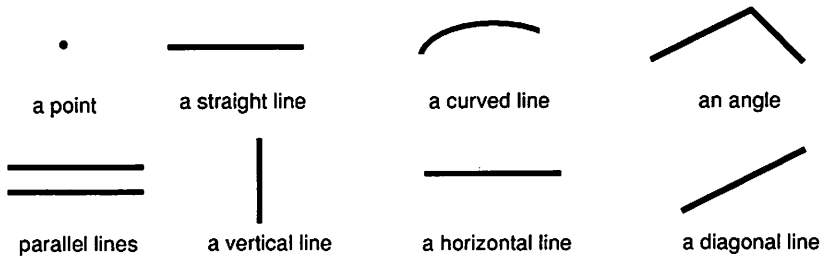


Lesson 1 Shapes

§ 1 One-dimensional and two-dimensional shapes

1. 英語では点、直線、曲線、角、平行線、垂直線、水平線、対角線は各々次のようにいう。



- A. 次の文を読んで、質問に答えなさい。

The letter 'E' has one vertical line and three horizontal lines.
It also has four angles.

Which of these letters are described below?

D, M, C, H, F, L, Z, B

- a) A letter with 1 curved line and no straight lines. ____
 b) A letter with 2 curved lines and 1 vertical line. ____
 c) A letter with 2 parallel vertical lines, 1 horizontal line and 4 angles. ____
 d) A letter with 2 vertical lines and 2 diagonal lines. ____

- B. 次の記号を説明する文を例にならって書きなさい。

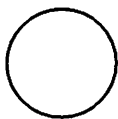
			
the plus sign	the minus sign	the multiplication sign	the division sign

【例】 = The equal sign has two horizontal, parallel straight lines.

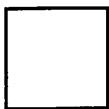
- a) +
 b) ×
 c) ÷

vertical [vé:rtikl] 「垂直の」 horizontal [hò(:)rezántl] 「水平の」 diagonal [daiégenl] 「対角線の、斜めの」 dimensional [diménʃənl] 「～次元の」

2. 英語では円、正方形、長方形、三角形、半円を各々次のようにいう。



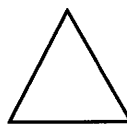
a circle



a square



a rectangle



a triangle

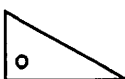
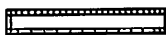


a semi-circle

A. 次の質問に答えなさい。

- Which figure always has equal sides?
- Which figure has 3 angles?
- Which figure has a curved side and a straight side?

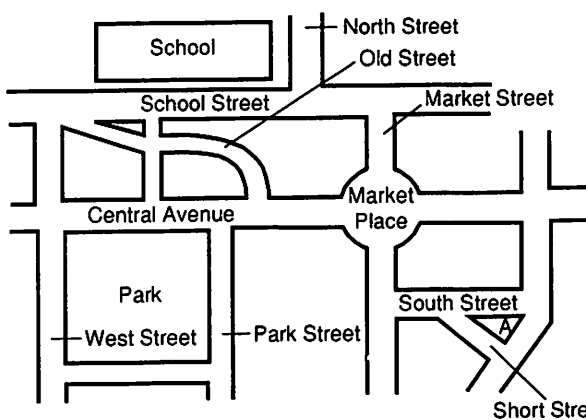
B. 例にならって次の空欄を埋めなさい。



【例】 A coin is shaped like a circle. It is *circular* in shape.

- A ruler is shaped like a rectangle. It is _____ in shape.
- A set square is shaped like a triangle. It is _____ in shape.
- A protractor is shaped like a semi-circle. It is _____ in shape.
- A chess-board is shaped like a square. It is _____ in shape.

3. 次の地図を見て質問に答えなさい。



- What shape is the school?
.....
- Which area is square?
.....
- Which part is roughly circular in shape?
.....
- Name two streets which are parallel.
.....

e) Which streets meet at an angle of 90 degrees (at right angles)?
.....

§ 2 Three-dimensional shapes

4. 英語では球、半球、円柱、立方体、直方体、円錐を各々次のようにいう。



a sphere



a hemisphere



a cube



a rectangular prism



a cylinder



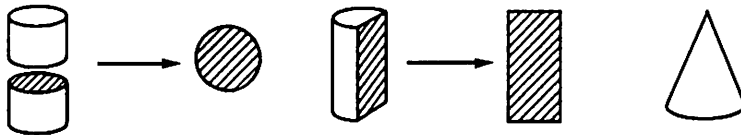
a cone

それぞれの立体の形を説明する文を例にならって作りなさい。

【例】 A sphere has one *surface*. It is *curved*.
A cube has 6 *surfaces*. They are all *flat* and square.

- a) A hemisphere
- b) A rectangular prism
- c) A cylinder
- d) A cone

5. 次の説明を読み、問に答えなさい。



The *cross-section* of a cylinder is circular. The *longitudinal* section is rectangular. The sides of a cylinder are parallel. The sides of a cone are *tapering*.

- a) What shape is the cross-section of a sphere?

- b) What shape is the longitudinal section of a hemisphere?

c) Which solid is rectangular in cross-section?

d) In longitudinal section, are the sides of a cylinder parallel or tapering?

e) What shape is the cross-section of a cone?


6. 次の空欄に適語を入れなさい。

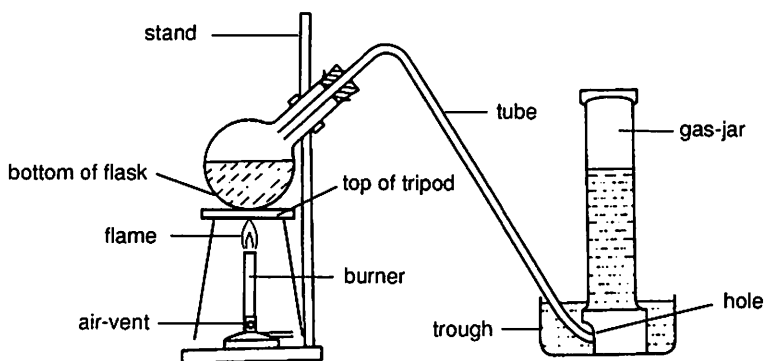
a) Cylindrical = shaped like a _____

b) Cubic = shaped like a _____

c) Conical = shaped like a _____

d) Spherical = shaped like a _____

7. 下の絵を見ながら CD を聞き、空欄に適語を書き入れなさい。  1



In this apparatus, the bottom of the flask is 1) _____ in shape. The flask is in a 2) _____ position. The stand is 3) _____. The gas-jar is 4) _____ in shape. The burner is also 5) _____. The air-vent is 6) _____. The flame is 7) _____. The bottom of the trough is 8) _____. The hole at the bottom of the gas-jar is 9) _____ in shape. The top of the tripod is 10) _____. In cross-section, the tube is 11) _____.

apparatus [əpərə'tætəs] 「実験装置」 trough [trʊ(:)f] 「水槽」 air-vent 「通気調整口」
 tripod [traɪpəd] 「三脚」 gas-jar 「集気びん」