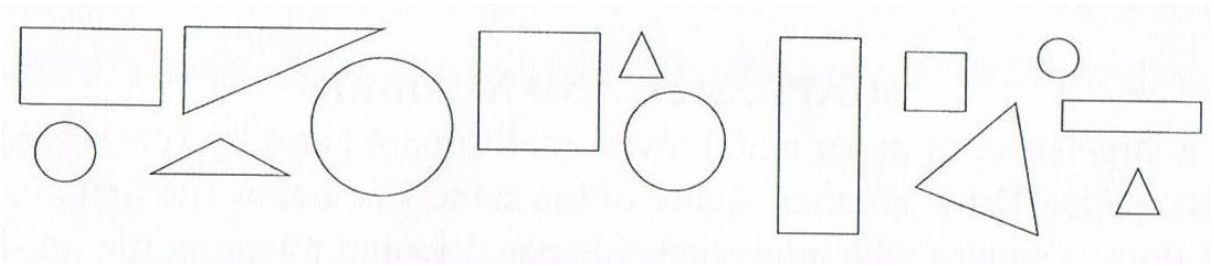
SHAPE, SIZE AND POSITION (PART 1)

POSITION AND SHAPE

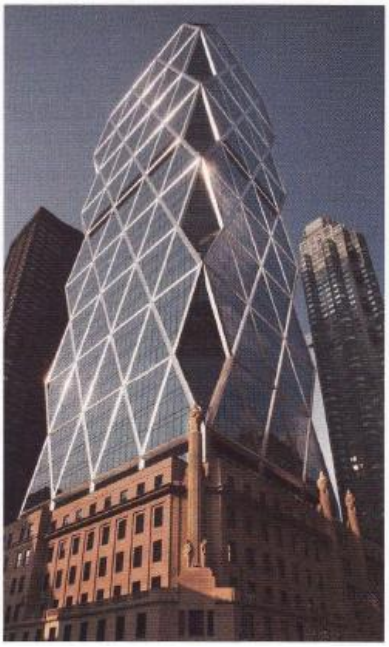
Work in pairs.
a) Ask your partner to find a particular <u>figure</u>: ***a small / big square, triangle, circle, rectangle****.*
b) Say where it is. Use the expressions:
above, under, next to, on the left, on the right, in the middle of, between

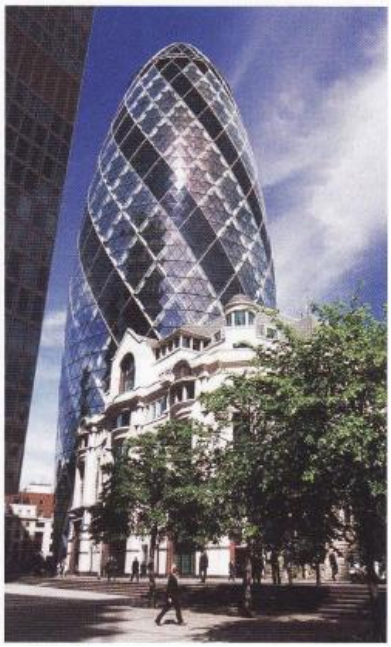


BUILDINGS

I. Work in pairs and discuss these questions.

1 What are the names of these buildings?
2 Where are they located?
3 Why do architects say that they have the same structural design?
4. Imagine the base (or plan) of each building. Which one is roughly (1) <u>circular</u> (2) <u>oval</u> and (3) <u>rectangular</u> in shape?

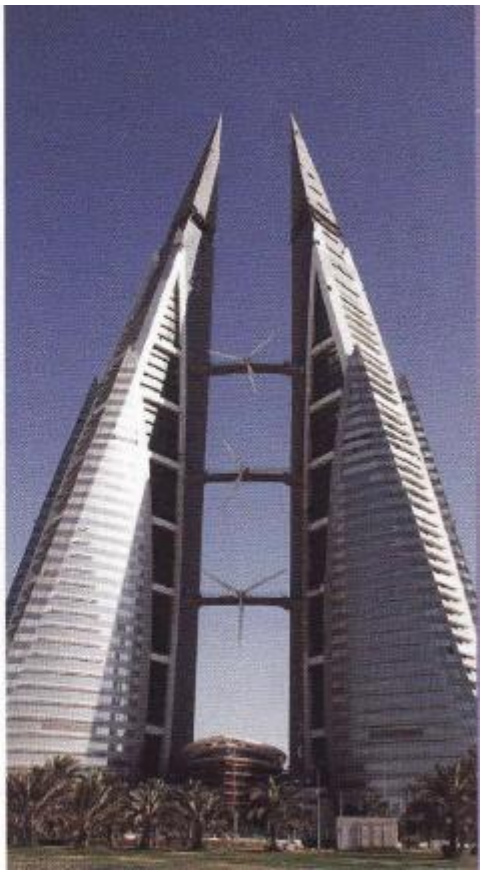




II. Read these fact sheets and write the correct names of the buildings in 1.

Building # 1: _____ _ HEIGHT: 181 .97 m STOREYS: 46 FLOOR AREA: 80,000 m2 SHAPE: approximately rectangular prism; its vertical edges have a zigzag shape; floor virtually rectangular; uses 21 % less steel than a standard design ENERGY CONSUMPTION: about 25% less than a standard building	Building # 2: _____ _ HEIGHT: 179.80 m STOREYS: 41 FLOOR AREA: 47,950 m2 SHAPE: roughly conical, with curved tapering sides; tower bulges out slightly from its base, reaching its maximum width at the 16th floor; floor plan approximately circular ENERGY CONSUMPTION: half as much as a normal tower of the same size	Building # 3: _____ _ HEIGHT: 160 m STOREYS: 35 FLOOR AREA: 50,000 m2 SHAPE: curved tower leaning westwards 18° off vertical (four times as far as the Leaning Tower of Pisa); believed to be 'the most inclined tower in the world'; floor plan roughly elliptical (oval) the steel weighs 21,500 t (80% lighter than Beijing's Bird's Nest)

III. Describe the shapes of the buildings below using vocabulary from the table on p. 3.



IV. Work in groups. Choose the winner of the award for the best tall building. The short-listed buildings are buildings 1-5. Before you begin, decide on your criteria for the award, for example beauty, innovation, functionality, low material consumption, low energy consumption.

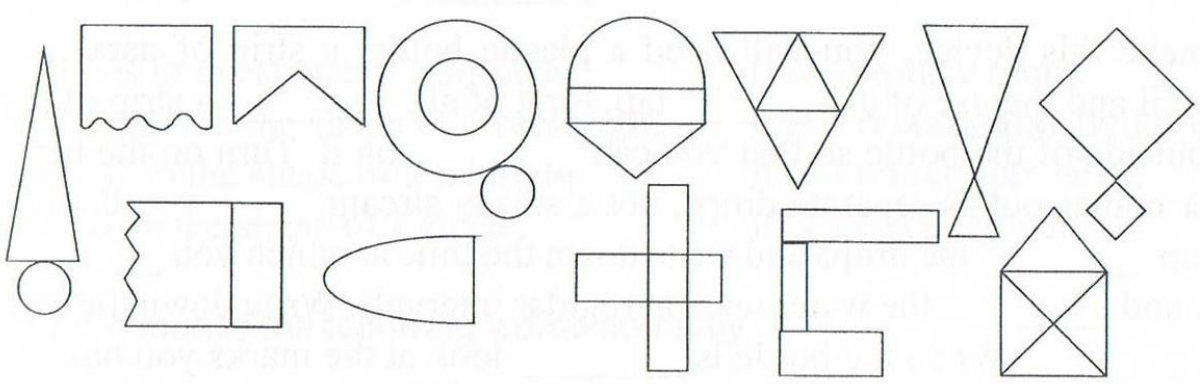
Make notes of your group's reasons for the decision.

VOCABULARY

POSITION	
ADVERBS/ADVERBIAL EXPRESSIONS	**ADJECTIVES**
in the middle x between x among at the top of (x on top of), at the bottom of on the right/left hand side of, on either side opposite near (to), close to, by behind, in front of, at the back of under, over, on top of beneath, underneath above, below, diagonally above	touching, adjacent to, attached to suspended above/over looking down on, looking up to fitting into half hidden, partially hidden, three sides visible x covering at an angle of 30 degrees, outer – inner upper – lower front – rear inverted, upturned, upside down level with equidistant from parallel to/with perpendicular to
SHAPE	
ADJECTIVES	
circular, semi-circular rounded curved curvilinear elliptical, oval diagonal pointed tapered	shaped like, sail-like, heart-shaped, star-shape horizontal, vertical slanting, sloping inclined zigzag solid hollow

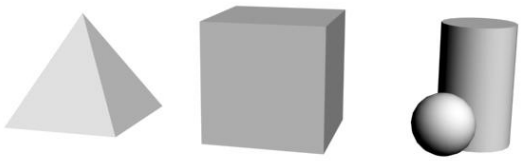
OTHER USEFUL WORDS		
NOUNS	**VERBS**	**ADVERBS**
sphere, ball semi-sphere block, prism cube cone pyramid cylinder edge face	bulge taper	approximately, roughly, virtually nearly easily by far

I. Choose one of the shapes below. Tell your partner how to draw it, use the vocabulary from the table above. Then compare your figures.



II. Read the description of the figure below:

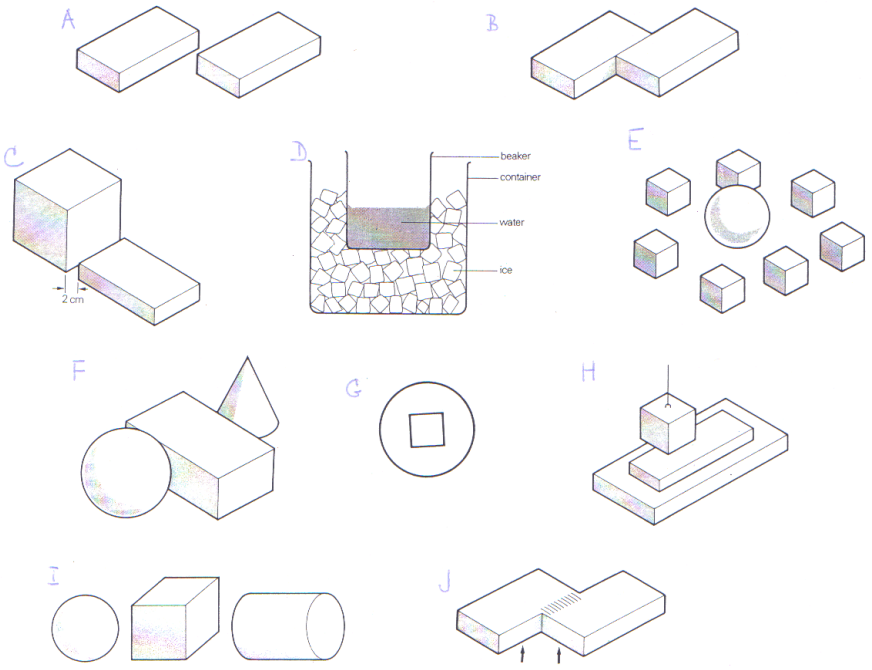
There is a cube between a pyramid on the left and a sphere on the right. They are level with the cube and equidistant from it. There is a vertical cylinder behind the sphere, slightly to the right of it and partially hidden.



III. Now write a description of the following figure.

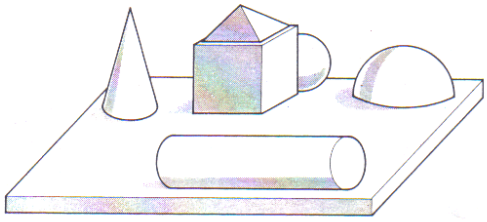
IV. Match the following descriptions with the figures below:

1. The cube is suspended above/over the small rectangular block.
   The small rectangular block rests on top of the large rectangular block, under/below/beneath/underneath the cube.
2. The cone is behind/at the back of the rectangular block.
   The sphere is in front of the rectangular block.
3. The cube is between the sphere and the cylinder.
4. The square is in the middle /centre of the circle.
5. The rectangular block is near to/close to/on the right (-hand side) of/by the side of/beside the cube.
   The cube is near to/close to/on the left (-hand side) of/by the side of/beside the rectangular block.
6. There is water inside the beaker. The beaker stands in/inside a container of ice. There is ice around the beaker.
7. There is a sphere among/amongst the cubes.
8. These blocks are touching (each other).
9. These blocks are separate/apart.
10. These blocks are joined. These two sides are adjacent (to each other).

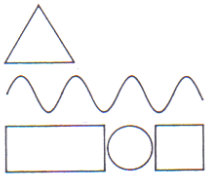


V. Describe the following figures. Write your descriptions on a separate sheet of paper.

A



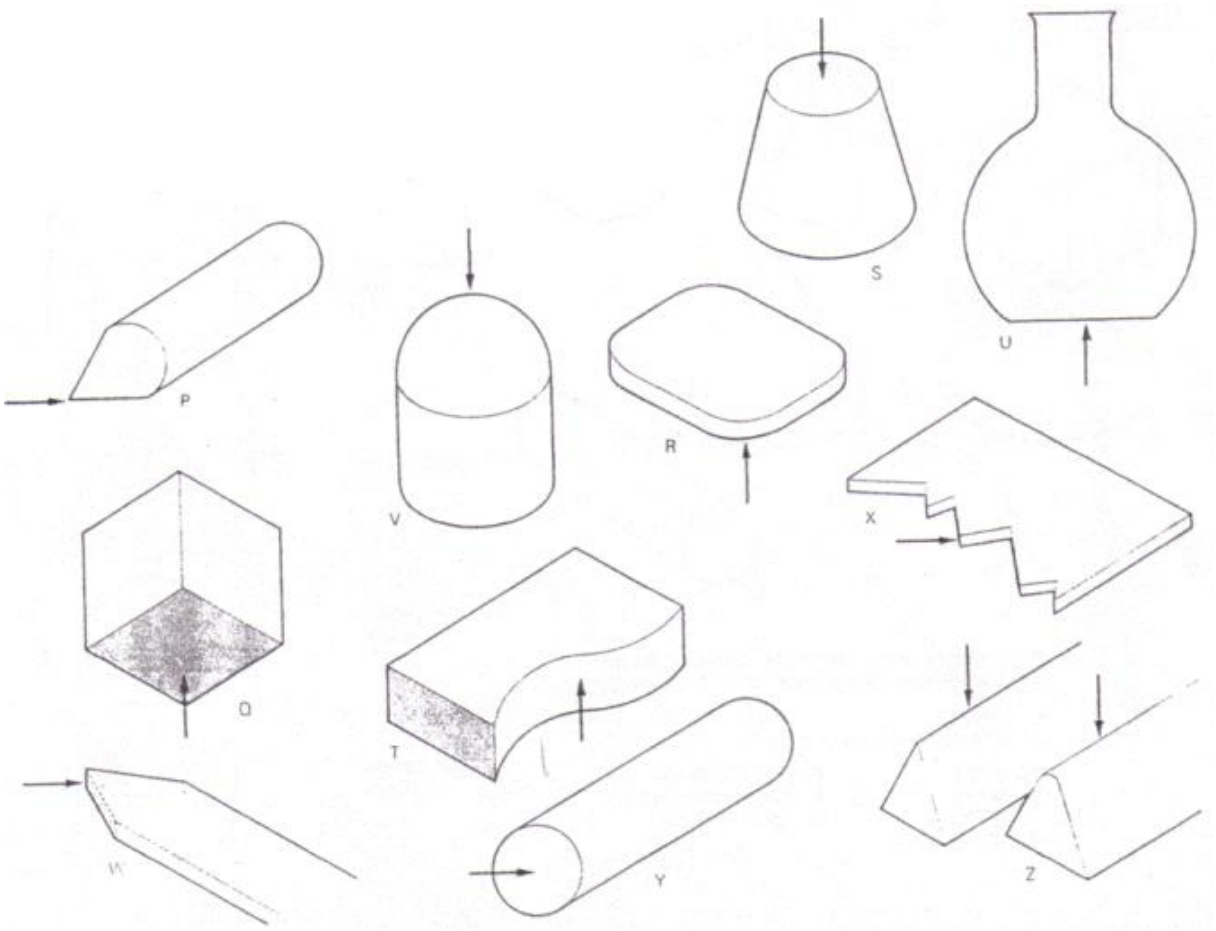
B



VI. Make simple drawings of the following:

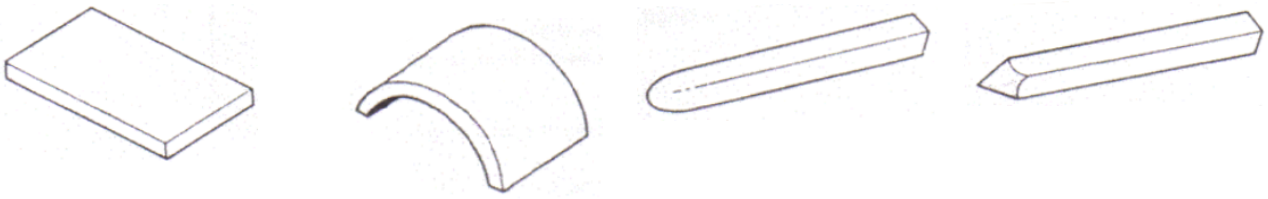
1. an acute-angled triangle
2. an irregular five-sided figure
3. an S-shaped tube
4. a flat-headed screw
5. a wide-toothed saw
6. a two-pronged fork
7. a three-legged stool
8. a star-shaped crystal
9. a flat-bottomed ship
10. a four bladed fan

VII. Describe the shapes of the parts of the following object which are marked with an arrow. For example: The end of P is pointed.



VIII. Study the pictures and then complete the sentences with appropriate adjectives.

A B C D



1. While A is a …… plate, B is a …… plate.

2. C is a rod which is …… at one end. On the other hand, D is ……

IX. Fill in the chart. Then underline the adjective or noun from which the verb is derived.

ADJECTIVE	NOUN	VERB
	width	
		broaden
deep		
short		
	length	
		strengthen
weak		
thick		

X. Fill in suitable verbs (from the chart above) in these sentences:

1. The time interval between buses has been __________________ to five minutes. 2. Outside the town the road ________________________ and turned south. 3. On its way to the sea the river _________________ and is used by ships. 4. Close to the beach the sea ______________________ gradually. 5. Frequent washing ________________ the life of any textile. 6. Lack of exercise ________________ the body. 7. What other arguments did she use to _____________________ her point? 8. They are going to ___________________ High Street.

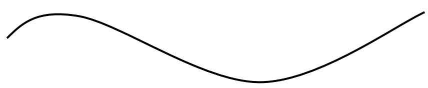
XI. Fill the sentences with the appropriate words:
dash-and-dot, wavy, solid, zigzag/jagged, dotted, broken, curved

1. This line is ……………….. _______________________________

2. This line is ……………….. -

3. A ………………….. line. ………………………………………………….

4. A ………………….. line. -·-

5. A ………………….. line. 

6. A ………………….. line. 

7. A ………………….. line.