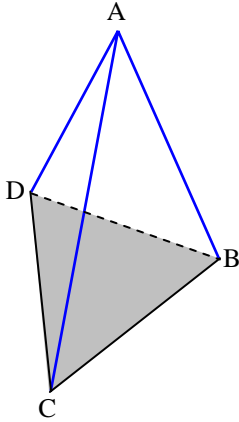


SOLIDS, NETS, AND CROSS SECTIONS

Polyhedra:

Exercises:

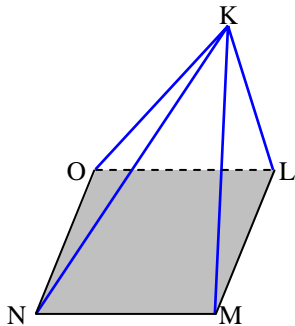
1. The figure below shows a tetrahedron with the faces $\triangle ABD, \triangle ABC, \triangle ACD$ and $\triangle BCD$.



The edges are $\overline{AB}, \overline{AC}, \overline{AD}, \overline{DB}, \overline{BC}$ and \overline{DC} .

The vertices are A, B, C and D ,

- 2.



The given figure is a pentahedron with faces $\triangle KLM, \triangle KMN, \triangle KNO, \triangle KLO$ and $\square LMNO$.

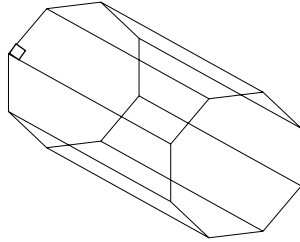
The edges are $\overline{KL}, \overline{KM}, \overline{KN}, \overline{KO}, \overline{LM}, \overline{MN}, \overline{NO}$ and \overline{LO} .

The vertices are K, L, M, N , and O .

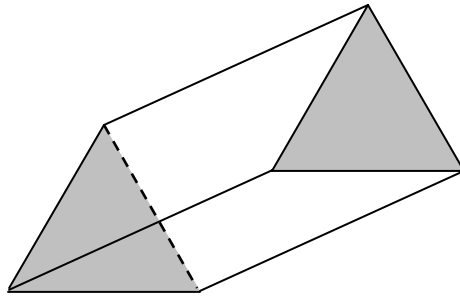
Prisms:

Exercises (page-4):

1. The right regular octagonal prism has 8 lateral faces, so totally it has 10 faces. It has 24 edges, 8 of them are lateral edges. The prism has 16 vertices.



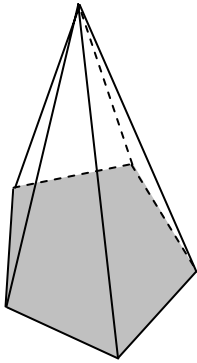
2. The figure below illustrates an oblique regular triangular prism. It has 5 faces (3 of them are lateral faces), 3 lateral edges and totally 9 edges. The prism has 6 vertices.



Pyramids

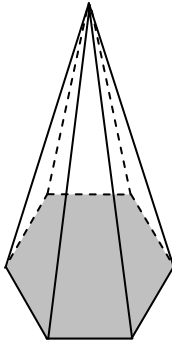
Exercises (page-6):

1.



The pentagonal pyramid has 5 lateral faces and thus 6 faces in total. It has 5 lateral edges, 10 edges and 6 vertices.

2.

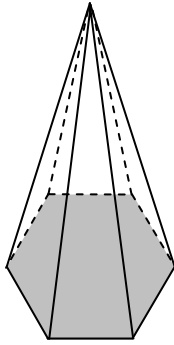


The hexagonal pyramid has 6 lateral faces and 7 faces in total. It has 6 lateral edges, 12 edges and 7 vertices.

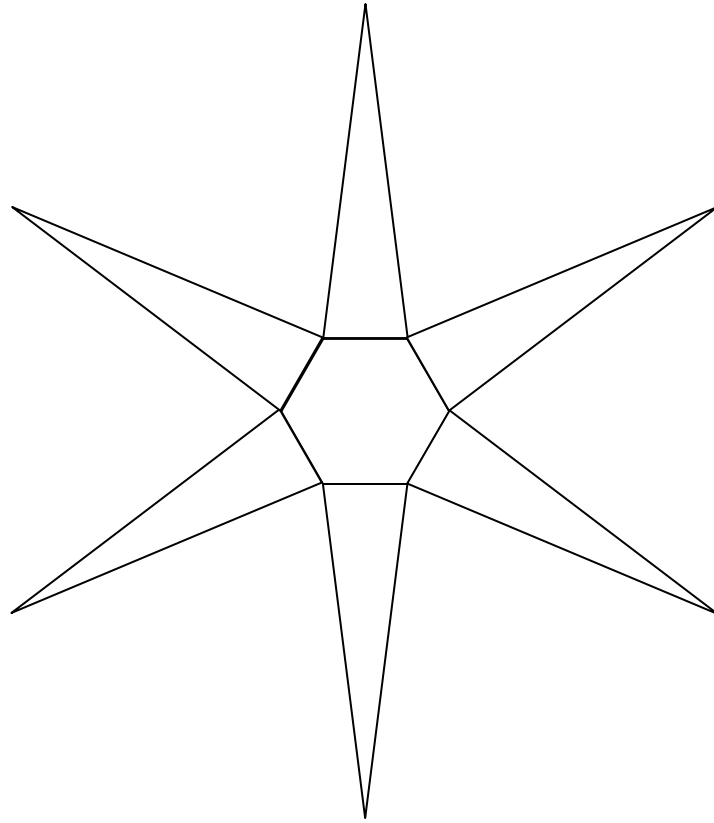
Nets

Exercises:

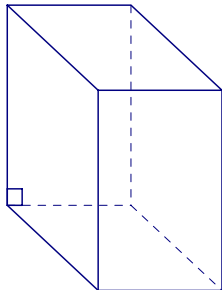
1.



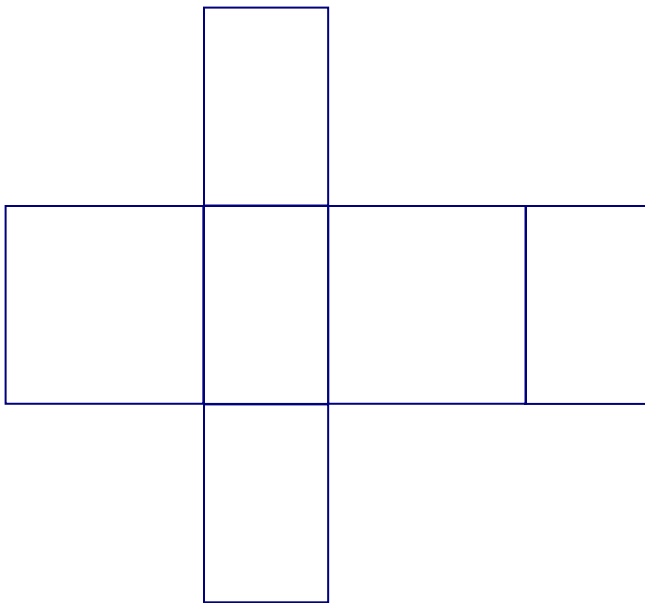
Regular right
hexagonal
pyramid



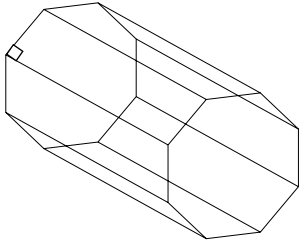
2.



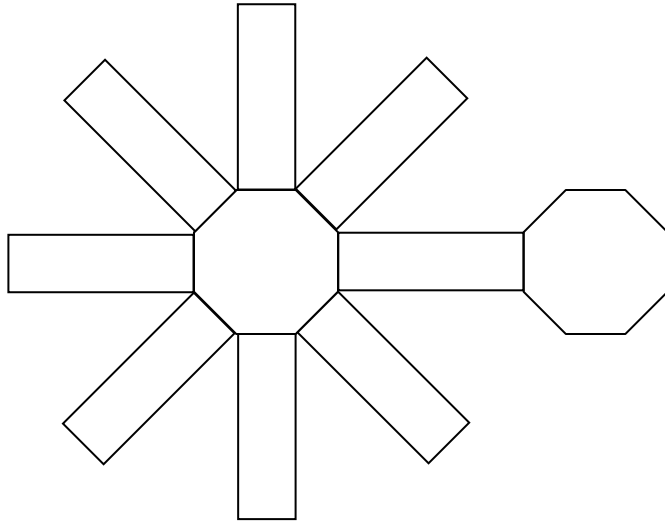
Rectangular
prism



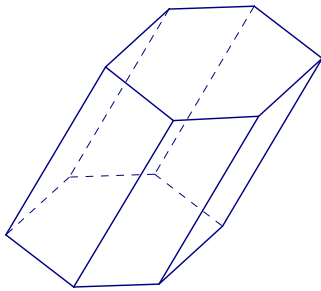
3.



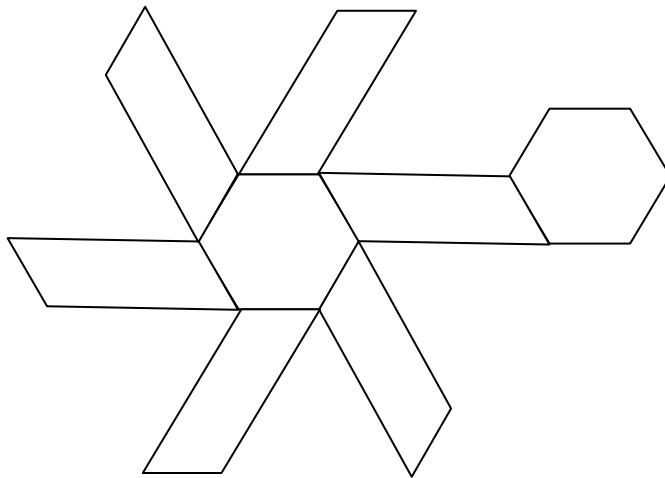
Regular right octagonal prism



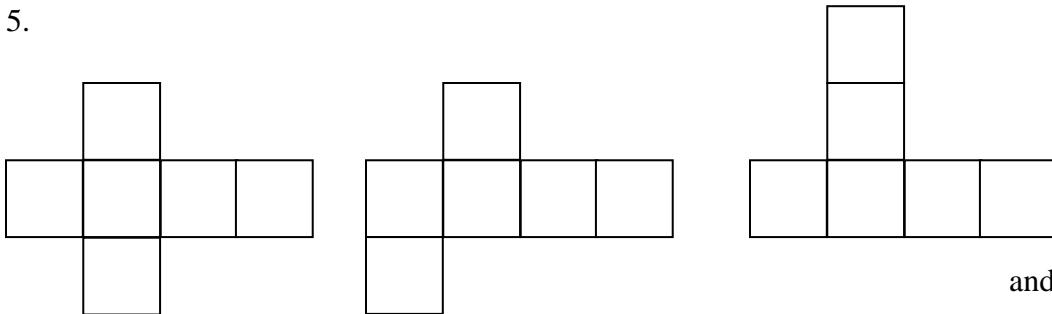
4.



Regular oblique hexagonal prism

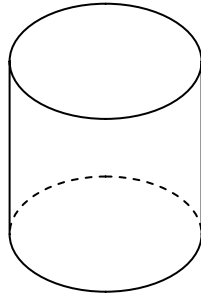


5.

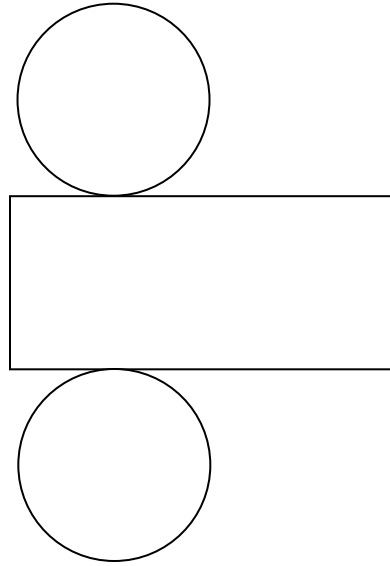


and so on...

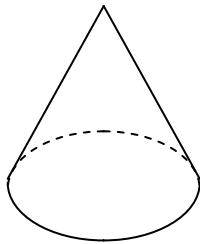
6.



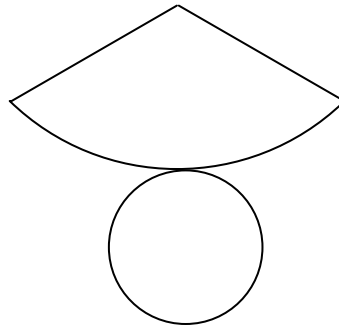
Right Cylinder



7.



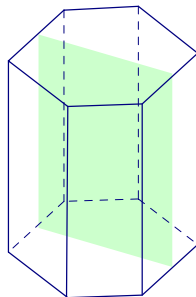
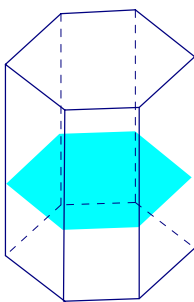
Right Cone



Cross sections:

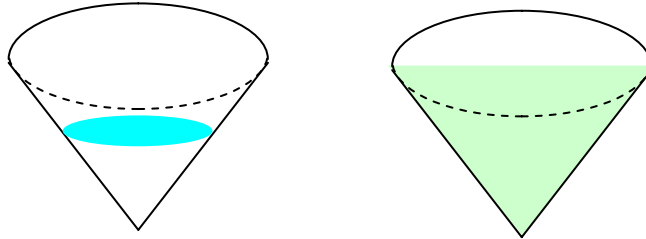
Exercises (page-15):

1.



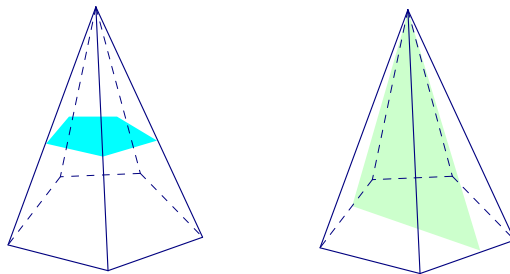
- i)* In the cross section parallel to the base, the cross section is a regular hexagon of the same size as the base.
- ii)* In the cross section perpendicular to the base, the cross section is a rectangle.

2.



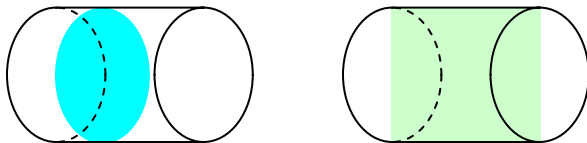
- i)* In the cross section parallel to the base, the cross section is another circle which is smaller than the base.
- ii)* In the cross section perpendicular to the base, the cross section is a triangle.

3.



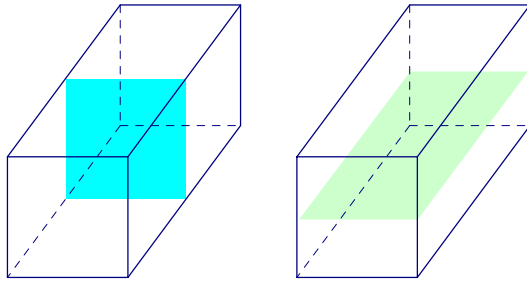
- i)* In the cross section parallel to the base, the cross section is another pentagon which is smaller than the base.
- ii)* In the cross section perpendicular to the base, the cross section is a triangle.

4.



- i)* In the cross section parallel to the base, the cross section is another circle which is congruent to the base.
- ii)* In the cross section perpendicular to the base, the cross section is a rectangle.

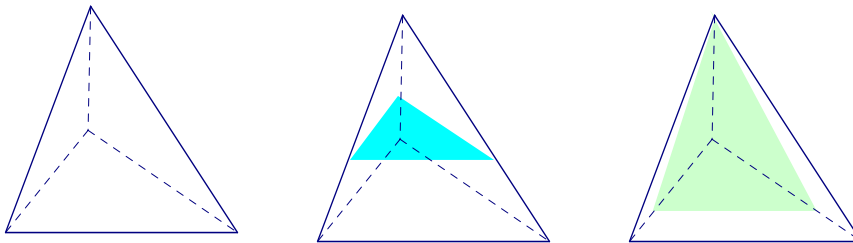
5.



- i)* In the cross section parallel to the base, the cross section is another square which is congruent to the base.
- ii)* In the cross section perpendicular to the base, the cross section is a rectangle which is congruent to the lateral faces.

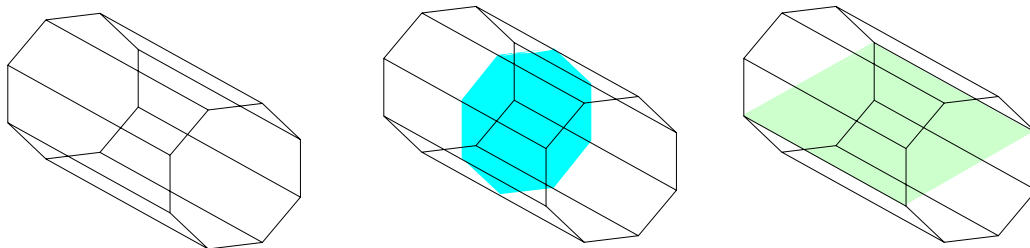
Exercises (page-16):

1.



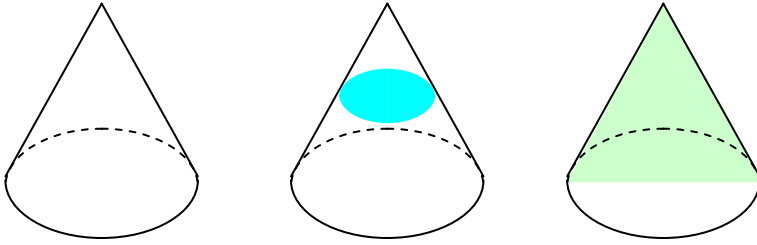
Triangular Pyramid

2.



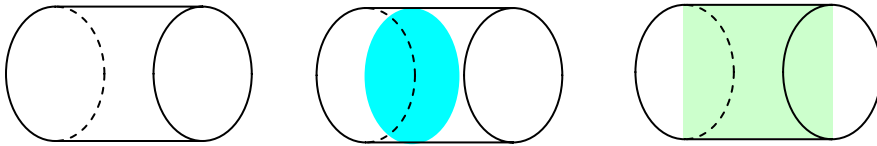
Regular right octagonal prism

3.



Cone

4.



Right cylinder