

TB(3A) Ch. 5 More about 3-D Figures

Conventional Questions

1. [14-15 Standardized Test #4]

Figure 1(a) shows the orthographic views of a solid. Draw the corresponding solid on the isometric grid provided. **(2 marks)**

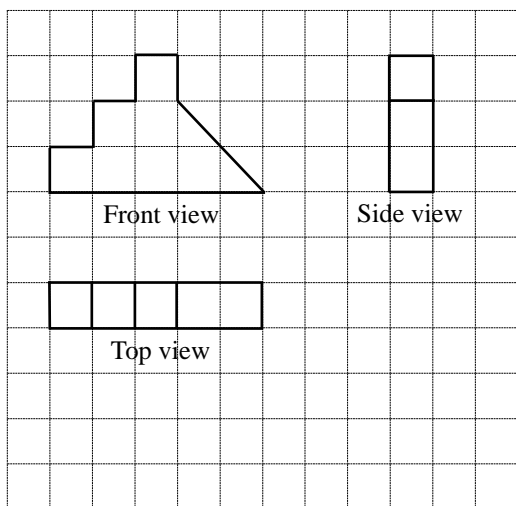
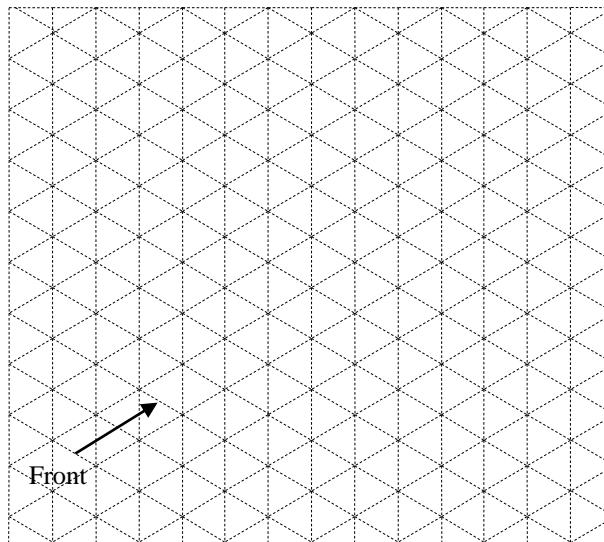


Figure 1(a)



2. [14-15 Standardized Test #5]

Figure 2(a) shows a net formed by 6 identical squares. Peter is going to move square *D* to another position such that the net can form a cube.

(a) Draw face *D* in **Figure 2(b)**. **(1 mark)**

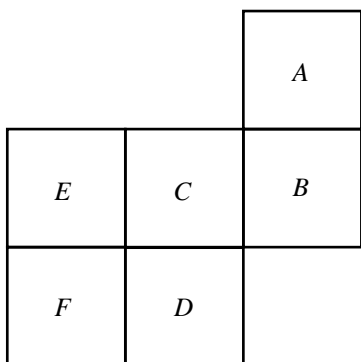


Figure 2(a)

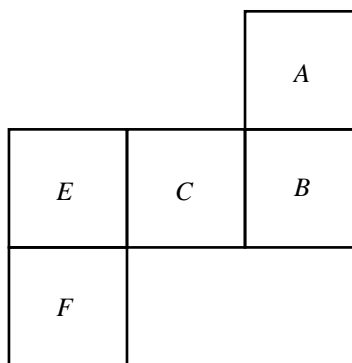


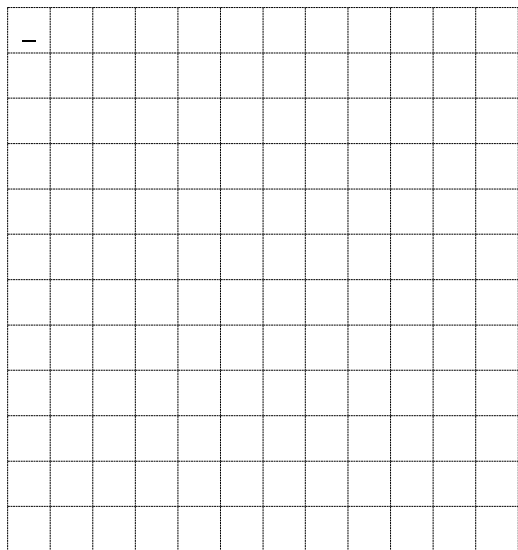
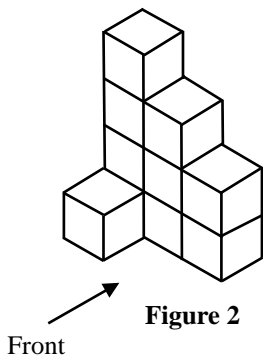
Figure 2(b)

(b) Hence name the letter on the cube which is opposite to face *D*. **(1 mark)**
 Face _____ is opposite to face *D*.

3. [14-15 Final Exam #4]

Figure 2 shows a solid which is made by 10 identical cubes. Draw the orthographic views of the solid on the grid paper provided.

(3 marks)



4. [15-16 Standardized Test #1]

Figure 1 shows a right triangular prism $ABCDEF$. It is given that $\triangle ABF$ and $\triangle DCE$ are isosceles right-angled triangles.

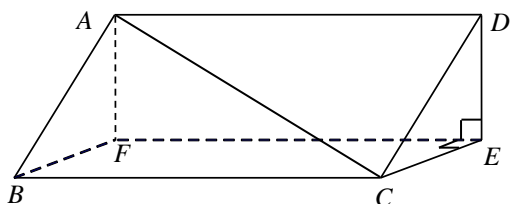
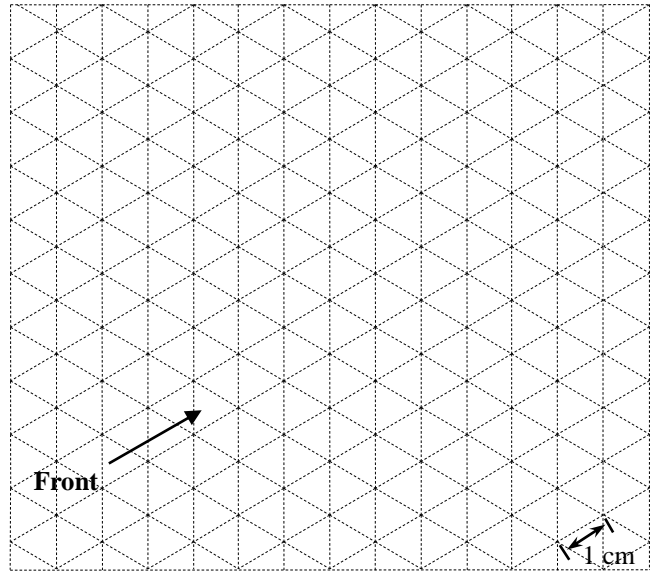
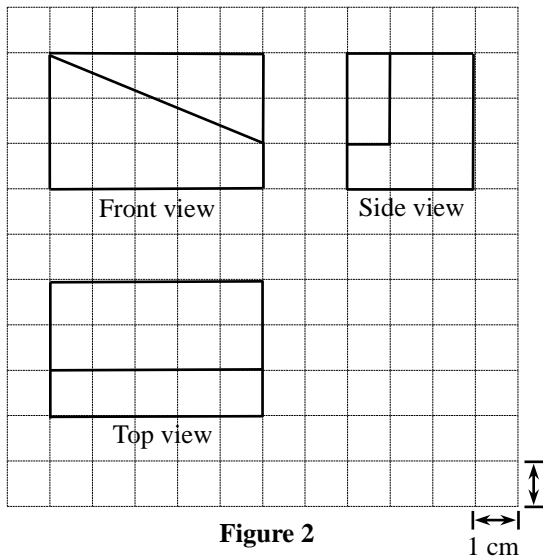


Figure 1

- (a) Name the projection of line AC on plane $BCEF$. _____ (0.5 mark)
- (b) Name the projection of line AC on plane $ADEF$. _____ (0.5 mark)
- (c) Name the angle between line AC and plane $BCEF$. _____ (0.5 mark)
- (d) Name the line segment representing the shortest distance from D to BC . _____ (0.5 mark)
- (e) Find the angle between planes $BCEF$ and $ADEF$. _____ (0.5 mark)
- (f) Find the angle between planes $ABCD$ and $ADEF$. _____ (0.5 mark)

5. [15-16 Standardized Test #3]

Figure 2 shows the orthographic views of a solid. Draw the corresponding solid on the isometric grid provided. **(2 marks)**



6. [15-16 Final Exam #9]

Draw the orthographic views for the solid shown in Figure 3 on the grid paper provided. **(3 marks)**

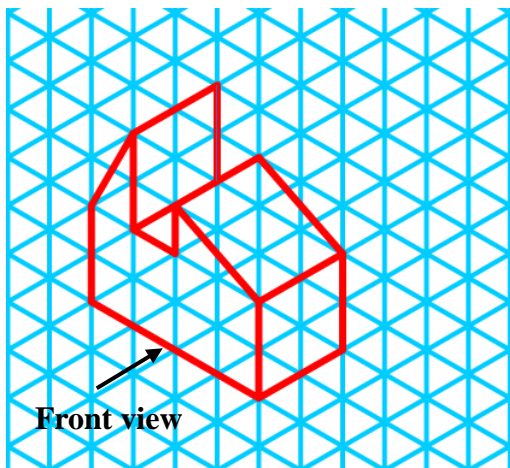
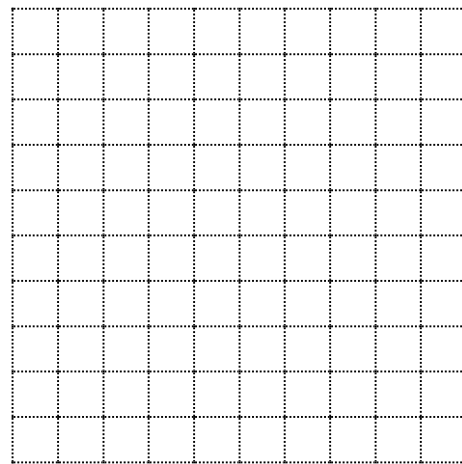


Figure 3



7. [15-16 Final Exam #10]

Figure 4 shows a cuboid $ABCDEFGH$ with different length, width and height.

- (a) Name the projection of GD on plane $CDEF$. (0.5 mark)

- (b) Name the angle between planes $BGED$ and $BCFG$. (0.5 mark)

- (c) Write down the number of planes of reflection of the cuboid. (0.5 mark)

- (d) Write down the number of axes of symmetry of the cuboid. (0.5 mark)

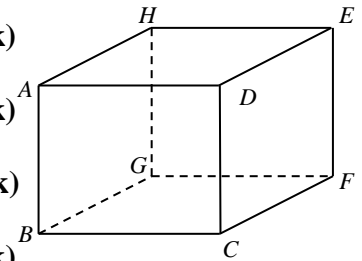


Figure 4

8. [16-17 Final Exam #2]

Figure 1 shows the orthographic projection of a solid, draw the solid by using the isometric grid provided below. (2 marks)

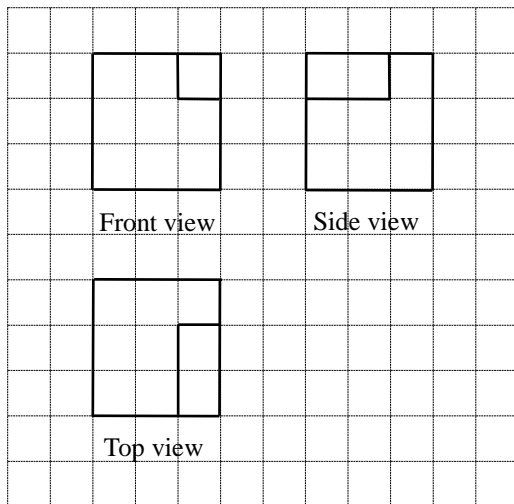
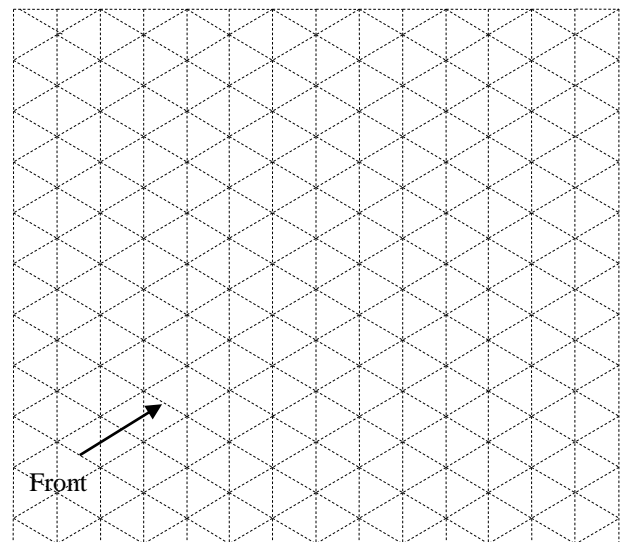


Figure 1



9. [16-17 Final Exam #3]

Figure 2 shows a right pyramid $VABCD$ with a square base $ABCD$. It is given that G is the projection of V on plane $ABCD$ and H is the mid-point of BC .

- (a) It is known that $VABCD$ has one axis of rotational symmetry. What is the order of it?

- (b) Name the angle between the line VB and the base $ABCD$.

- (c) Name the angle between the plane VBC and the base $ABCD$. (1 mark)

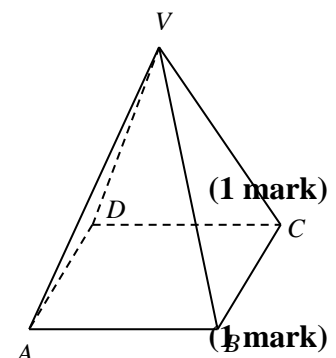


Figure 2

10. [17-18 Standardized Test 2 #1]

Figure 1 shows a cube $ABCDEFGH$.

(a) Name the angle between line EA and plane $ABCD$.
 _____ (0.5 mark)

(b) Name the angle between line EC and plane $BCHG$.
 _____ (0.5 mark)

(c) Find the order of rotational symmetry of the cube with EB as the axis of rotation.
 _____ (0.5 mark)

(d) Find $\angle AEC$.
 _____ (0.5 mark)

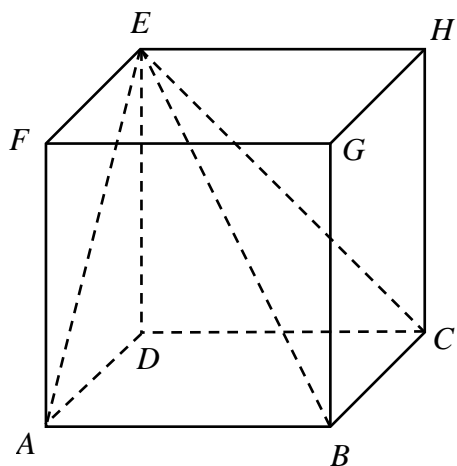
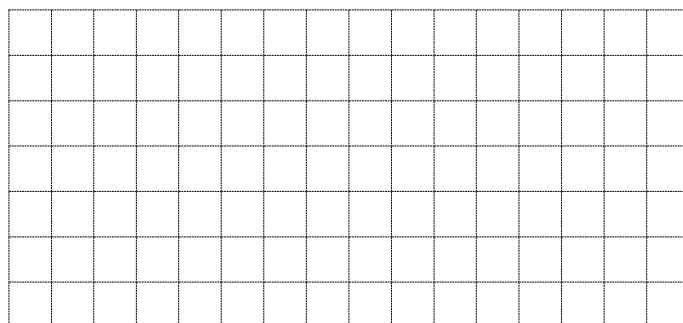
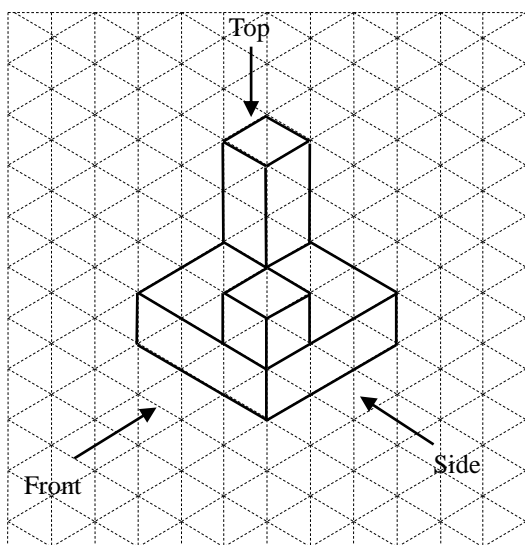


Figure 1

11. [17-18 Final Exam #3]

Assuming that there are no hidden parts in the solid shown in Figure 1, draw its orthographic views on the grid paper provided. (3 marks)



12. [18-19 Standardized Test 2 #1]

Draw the orthographic views of the solid shown in **Figure 1** on the grid paper provided.

(3 marks)

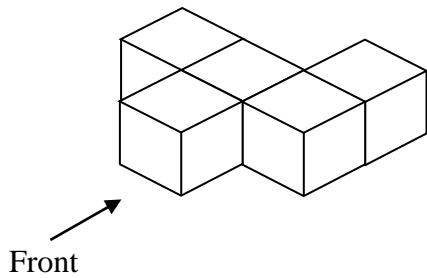
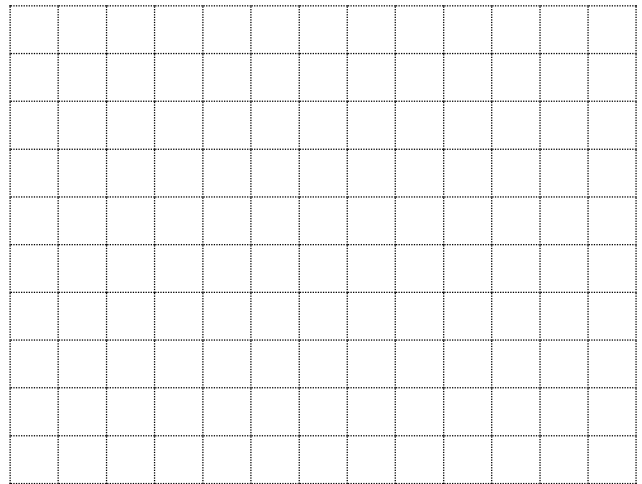


Figure 1



13. [18-19 Final Exam #3]

Draw the orthographic views of the solid shown in **Figure 1** on the grid paper provided.

(3 marks)

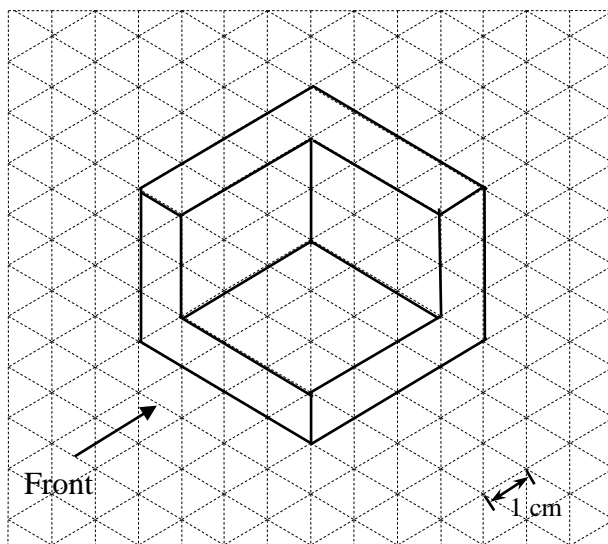
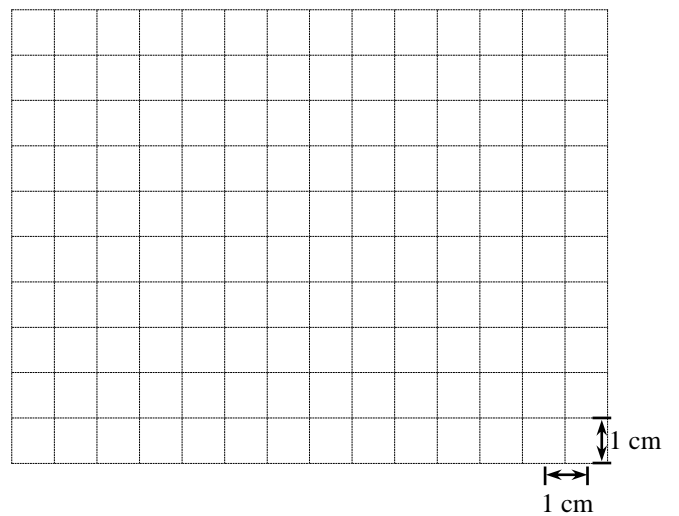


Figure 1



~ End ~