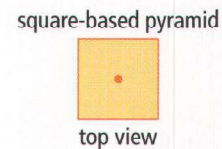


7.10 - Questions Handout #s 3 - 15

Communicate the Ideas

1. Refer to the model of the fort at the beginning of this section. If the children decide to add an extra block onto each corner to create watchtowers, how would the front view, top view, and side view of the fort change? Draw them.
2. Does an object always have the same front face? Explain.
3. Compare the top views of a cube and a square-based pyramid. How are their top views different from each other?

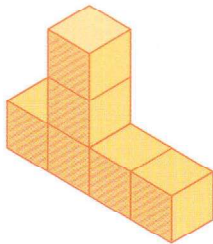


Check Your Understanding

Practise

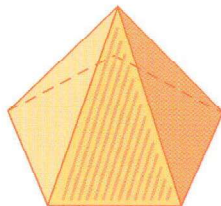
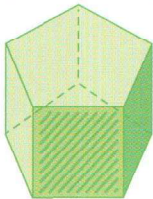
For help with questions 4 to 6, refer to Example 1.

4. Draw the front, top, and side views of this figure.



5. Sketch the front, top, and side views of each three-dimensional figure.

- a) pentagonal prism b) pentagonal pyramid

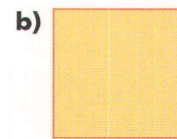
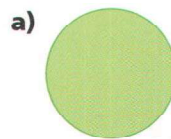


6. Sketch the front, top, and side views of each three-dimensional figure.

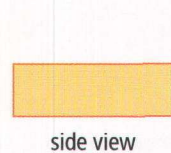
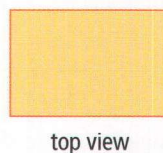
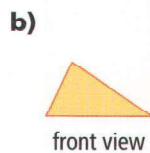
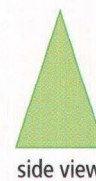
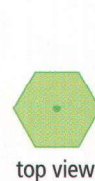
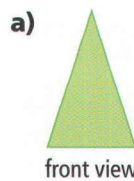
- a) hexagonal prism
b) octagonal prism
c) decagonal prism

For help with questions 7 to 9, refer to Example 2.

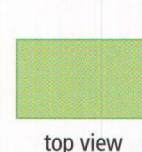
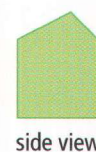
7. The top views of some objects are shown. Name two possible three-dimensional figures each might be.



8. Identify each geometric figure from the front, top, and side views.



9. The diagrams show the front, top, and side views of an object. Make a sketch to show the overall shape of the three-dimensional object.

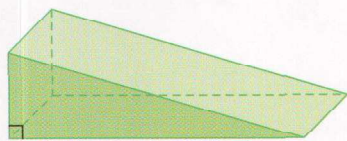


Apply

10. Sketch the front, top, and side views of each three-dimensional object.
- carton of milk
 - CD box
 - can of pop
11. Choose three objects in your classroom with different shapes and sketch the front, top, and side views of each.

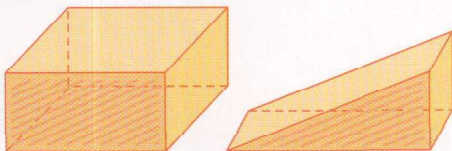
Chapter Problem

12. a) Draw three views of a skateboard ramp.



- b) If the ramp is curved, which view will change? Draw what it might look like.

13. Suppose you have a rectangular prism and a triangular prism.



- Is it possible for these two polyhedra to have the same top view? Explain.
- Is it possible for these two polyhedra to have the same side view? Explain.
- Is it possible for these two polyhedra to have the same front view? Explain.

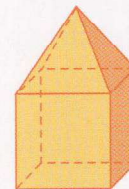


14. Draw the front, top, and side views for each combination of simple objects.

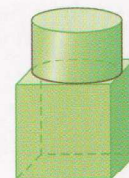
- a) two cubes placed horizontally side by side



- b) one square-based pyramid placed on top of a cube

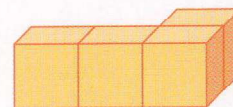


- c) one cylinder placed on top of a cube



Extend

15. Find all the ways that four cubes can be placed on the table so that at least one face of each cube is matched with one face of another cube. Draw the front, top, and side views for each figure.



16. You are hired by a company to draw designs for a house built using six hollow cubes. Each cube has a side length of 4 m.
- Draw three different house designs using the six cubes.
 - Compare the number of walls, area of roof, and amount of floor space among the three designs. If each square metre of wall costs \$120 to construct, each square metre of roof costs \$200, and each square metre of floor costs \$100, which house design is least expensive?