5 Practice Test

For #1 to #5, choose the best answer.

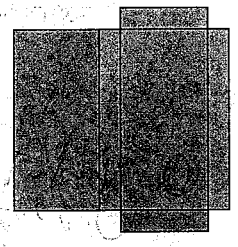
1. The top view of this container shows a

A circle
B square
C triangle
D rectangle

2. One face on a cube has an area of 49 cm^2. What is the surface area of the cube?

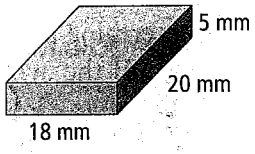
A 343 cm^2
B 294 cm^2
C 196 cm^2
D 154 cm^2

3. What three-dimensional object has a net like this one?



A cube
B cylinder
C triangular prism
D rectangular prism

4. What is the surface area of this box?



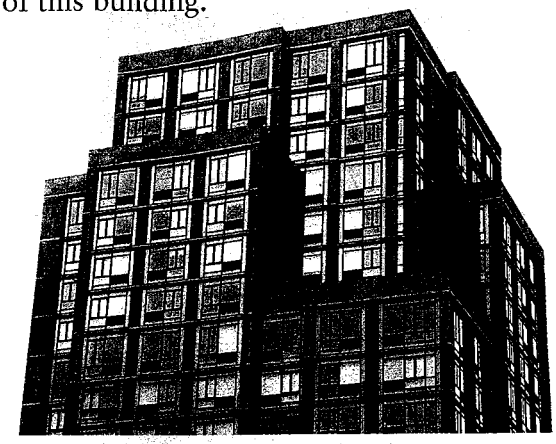
A 550 mm^2
B 900 mm^2
C 1100 mm^2
D 1800 mm^2

5. What is the surface area of a cylinder that is 30.5 cm long and has a radius of 3 cm, to the nearest hundredth of a square centimetre?

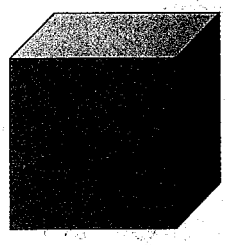
A 274.50 cm^2
B 603.19 cm^2
C 631.14 cm^2
D 688.01 cm^2

Short Answer

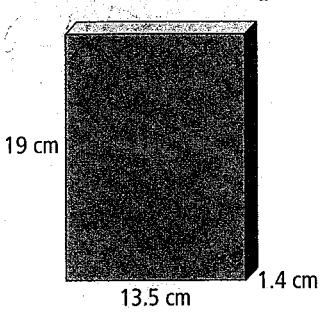
6. Sketch the top, front, and side views of this building.



7. An object may have more than one net. Draw three different nets for this cube.



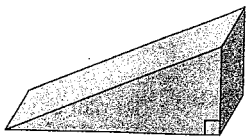
8. A DVD case is made of a plastic covering that measures 19 cm long, 13.5 cm wide, and 1.4 cm thick. Calculate the surface area to the nearest tenth of a square centimetre.



9. The surface area of a cube is 1014 cm^2. Find the length of any side of the cube.

Extended Response

10. a) Sketch a three-dimensional object you can build using two of these triangular prisms.

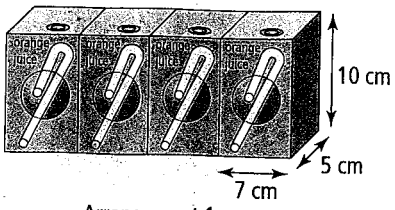


b) Draw the front view, top view, and side view of your object.

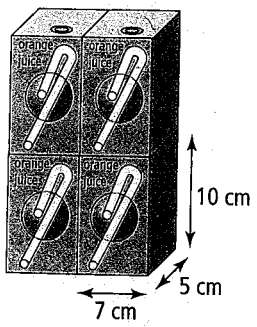
c) Draw a net for your object.

11. Ken and Arika are comparing their cylinders. Arika's cylinder is twice as tall as Ken's, but is only half the diameter. Ken's cylinder has a height of 18 cm and a diameter of 9 cm. Whose cylinder has the greater surface area? Explain.

12. Single-serving juice boxes measure 10 cm by 7 cm by 5 cm. A manufacturer wants to shrink wrap four boxes together for sale. Which of the following arrangements of the boxes will use the least amount of plastic wrap? Show how you know.



Arrangement 1



Arrangement 2