

FOMP 10 Chapter 2 Review Pack v1**Short Answer**

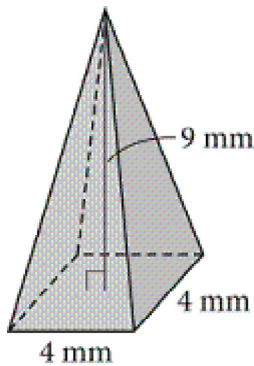
Use the table of conversion factors to help answer the following questions.

Imperial Unit	SI Unit
1 in.	2.54 cm
1 ft	0.3048 m
1 yd	0.9144 m
1 mi	1.609 km

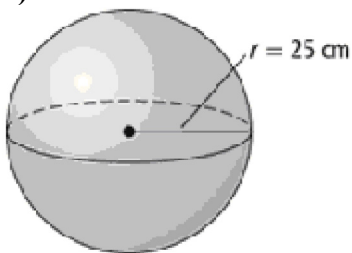
Level 1-2 Questions

1. Calculate the volume of each object. Express the answer to the nearest tenth of a cubic unit where necessary.

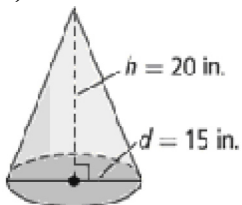
a)



b)



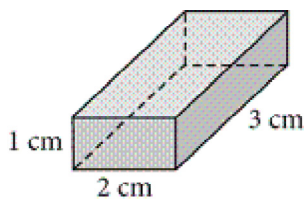
c)



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- Determine the area of a rectangle that is 85 cm by 30 cm, in square feet.
- A rectangle measures 29 cm by 52 cm. What is the area of the rectangle in square metres?
- What formula can be used to calculate the volume of a right cylinder?
- What formula can be used to calculate the surface area of a right cylinder?
- Calculate the surface area of the right prism.



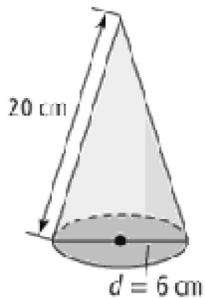
Level 3-4 Questions

- The base of a right prism has an area of 21.9 ft^2 . If the prism has a volume of 725 ft^3 , what is its height?
- A right pyramid has a volume of 120 m^3 . What is the volume of a right prism that has the same base and height as the pyramid?
- A right prism has a volume of 840 ft^3 . What is the volume of a right pyramid that has the same base and height as the prism?
- Determine the volume of a right prism that has a base area of 140 mm^2 and a height of 10 cm.
- What is the volume of a right pyramid that has a base area of 44.8 yd^2 and a height of 38.2 ft?

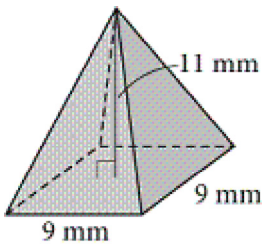
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12. A right rectangular prism has a surface area of 946 mm^2 . It has length 22 mm and width 11 mm . Determine the height of the prism.
13. Calculate the surface area of a right cylinder with diameter 10.8 cm and height 13.5 cm , to the nearest square centimetre.
14. Determine the surface area of the right cone, to the nearest square centimetre.



15. What is the surface area of the right pyramid, to the nearest square millimetre?

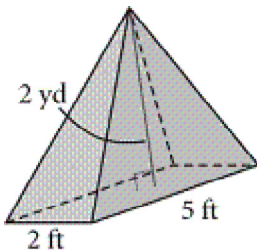


16. Determine the radius of a right cylinder with height 14.2 in. and volume 2645 in.^3 , to the nearest tenth of an inch.
17. To the nearest tenth of a metre, calculate the height of a right cylinder with radius 8.6 m and surface area 767 m^2 .
18. To the nearest cubic centimetre, what is the volume of a sphere with diameter 24 cm ?

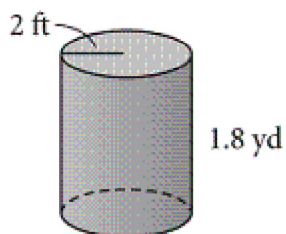
19. Determine the volume of a right cone with diameter 3 in. and height 10.3 in. Express the answer to the nearest cubic inch.
20. What is the height of a right cone with volume 27.5 mm^3 and radius 2.7 mm? Express the answer to the nearest tenth of a millimetre.
21. How much more air is needed to fill a basketball with a diameter of 9 in. than a volleyball with a diameter of 8 in.?
22. Mandy is pouring water into cylindrical glasses that have a diameter of 2 cm and a height of 16 cm. If she fills the glasses three-quarters full, how much water will be in each glass, to the nearest cubic centimetre?
23. What are the surface area and volume of each right cylinder, to the nearest tenth of a unit?
a) a cylinder with radius 1 m and height 3.4 m
b) a cylinder with radius 7.8 yd and height 2 yd

Level 5-6 Questions

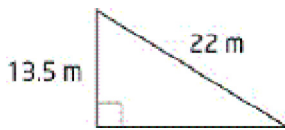
24. Calculate the surface area of the right pyramid, to the nearest tenth of a square foot.



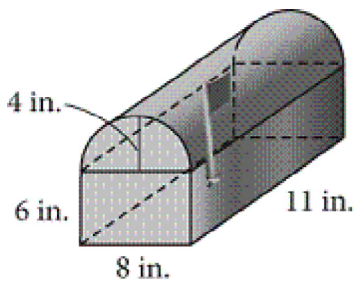
25. Calculate the surface area of the right cylinder, to the nearest square foot.



26. A sphere has the same volume as that of a right cone. The cone has a radius of 8 cm and a height of 12 cm. What is the radius of the sphere, to the nearest tenth of a centimetre?
27. Which object has the greatest surface area? Justify your answer mathematically.
- a) A right prism is 2 m long, 2 m wide, and 4 m tall.
 - b) A cube has edge lengths of 4 m.
 - c) A right pyramid with a 3-m by 3-m base has a slant height of 5 m.
 - d) An equilateral triangular right prism has a height of 6 m. The side lengths of the triangles are 2 m.
28. Determine the area of Natasha's garden, to the nearest square foot.

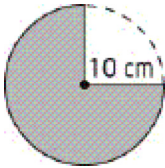


29. Helen plans to have a jeweller melt her gold bracelet and make her a pair of earrings. The shape of the earrings will be spherical. What will the radius of each earring be if the total volume of melted gold is 226 mm^3 ?
30. a) What is the surface area of the outside of the mailbox to be painted? Express the answer to the nearest tenth of a square inch.
- b) What volume of mail can fit inside the mailbox? Express the answer to the nearest tenth of a cubic inch.



Level 7-8 Questions

31. A right cone is formed from a circular base with radius 10 cm and a sector of 90° cut out.



- a) Determine the slant height of the cone.
b) Determine the radius of the cone.
c) What is the volume of the cone, to the nearest cubic centimetre?
32. Shao-Mei and Brian are in charge of putting away the softballs after gym class. They place them into a rectangular storage bin measuring 38 cm by 51 cm by 26 cm.
- a) Calculate the volume of the storage bin.
b) A softball has diameter 12.6 cm. What is its volume, to the nearest cubic centimetre?
c) Brian is sure that the bin is large enough to hold all 48 softballs. Shao-Mei disagrees. She believes the bin can hold only 24 balls. Who is correct? Explain and justify your reasoning.