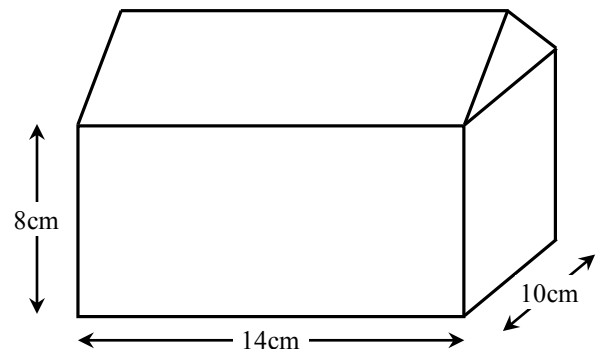


Remember: *It's best to draw the shape when it is not given!*

- Determine the volume of a rectangular-based prism with a length of 9 m, a width of 2 m and a height of 5 m.
- Determine the volume of a cylinder with a radius of 6 m and a height 14 m.
- Determine the volume of a triangular prism with a length of 18 cm and the triangular base has a height of 4 cm and a base of 6 cm.
- Determine the volume of a square-based pyramid that has a height of 6 cm and a square base with sides that are 5 cm.
- Determine the volume of a cone with a radius of 8cm and a *slant* height of 10 cm?
- What is the cost to make a solid steel wrecking ball with a diameter of 1.2 m if the cost of steel is \$180/m³?
- What is the cost to fill a box 2 m × 4 m × 3 m with sand if the cost of sand is \$2.25/m³?
- What is the cost to fill a cylindrical tank with liquid fertilizer if the diameter is 4 m, the height is 6 m and the fertilizer costs \$6.50/m³ ?
- Booster Juice is offering a special conical cup for a limited time. What is the cost to fill the cup if the height is 15 cm, the radius is 5 cm and the smoothie costs \$0.014/mL? (*note: 1 mL = 1 cm³*)
- A solid cylinder fits perfectly into a rectangular box. If the box has dimensions 8 cm × 8 cm × 12 cm, then how much extra space is left in the box?
- A cone fits perfectly into a cylindrical box with a diameter of 12 cm and height 14 cm. How much extra space is left in the cylindrical box?
- The Toblerone bar to the right contains 15 pieces (side-by-side -- assume no air gap between the triangular pieces). If each piece is 8 mm thick, has a base of 35 mm and a height of 38 mm, then how much space is inside an empty Toblerone package?
- How much space is contained in the cardboard house to the right if the height from the ceiling to the roof peak is 3 cm?



ANSWERS

- | | | | |
|--------------------------|---------------------------|----------------------------|--|
| 1. 90 m ³ | 2. 1583.4 m ³ | 3. 216 cm ³ | 4. 50 cm ³ |
| 5. 402.1 cm ³ | 6. \$162. ⁸⁶ | 7. \$54. ⁰⁰ | 8. \$490. ⁰⁹ |
| 9. \$5. ⁵⁰ | 10. 164.8 cm ³ | 11. 1055.6 cm ³ | 12. 79800 mm ³ = 79.8 cm ³ |
| | | | 13. 1330 cm ³ |

