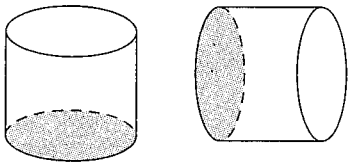
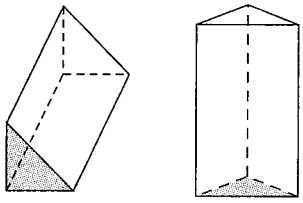
7.1 Understanding Volume

1. **a)** cylinder/prism, prism/cylinder, base, height
   b) does not
2. **a)** 
   b) 
3. **a)** 756 cm^3 **b)** 162 cm^3
4. **a)** 400 cm^3 **b)** 339 cm^3 **c)** 960 cm^3
5. 105 cm^3
6. **a)** Both have a volume of 200 cm^3.
   b) Both have a volume of 10.5 m^3.
7. **a)** 7 cm **b)** 6.5 m
8. 24.3 m^3
9. The chocolate bar on the left has less chocolate.

7.2 Volume of a Prism

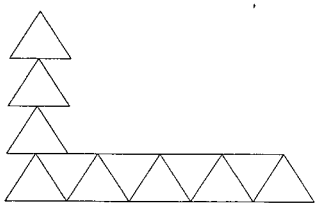
1. b
2. c
3. a
4. **a)** 540 cm^3 **b)** 119 m^3 **c)** 2560 cm^3
5. **a)** 91.1 cm^3 **b)** 343 cm^3
6. **a)** 162 cm^3 **b)** 63.8 m^3 **c)** 120 m^3
7. **a)** 384 cm^3 **b)** 672 m^3 **c)** 39 cm^3
8. The taller container on the left contains more juice.
9. 7.2 m^3

7.3 Volume of a Cylinder

1. circle
2. area, circle
3. volume, cylinder, area
4. **a)** 2119.5 cm^3 **b)** 2034.72 cm^3 **c)** 0.15 m^3
5. **a)** 1538.6 cm^3 **b)** 14.47 m^3
6. **a)** 1695.6 cm^3 **b)** 3229.49 cm^3
   c) 113.04 m^3 **d)** 5000.45 cm^3
7. **a)** 471 cm^3 **b)** 8 cm
8. 0.064 m^3

7.4 Solving Problems Involving Prisms and Cylinders

1. **a)** prisms, cylinders **b)** formula **c)** diagram
2. calculations
3. **a)** Diagrams will vary. **b)** 22
4. **a)** 788.53 cm^3 **b)** 938.47 cm^3
5. Cheyenne
6. **a)** Answers will vary. Example: I will fit five bead containers across the bottom row, then I will put four bead containers upside down on top of these five containers. I will build three other rows like this, making four rows of nine boxes each.
   Height of triangle = 3 cm
   Base of triangle = 4 cm
   4 rows high = 12 cm
   9 containers in a row
   5 triangles across bottom = 20 cm



   b) 36 **c)** 108