

MathLinks 8 Practice and Homework Book

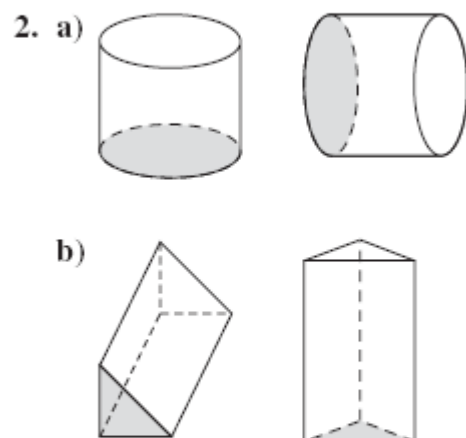
Chapter 7 Answers

7 Get Ready

- The right prisms are a) and c) and the right cylinder is f). These figures have faces that meet the base at 90° .
- Answers will vary.
 - between 175 and 200
 - between 720 and 800
 - between 140 and 210
- a) 416 cm^2 b) 123.8 m^2 c) 226.5 cm^2
- a) $4 \times 4 \times 4 = 64$
b) $3 \times 3 \times 3 \times 3 \times 3 = 243$
- No, 3 to the power of 4 is $3 \times 3 \times 3 \times 3$, which is 81, and 4 to the power of 3 is $4 \times 4 \times 4$, which is 64.

7.1 Understanding Volume

- a) cylinder/prism, prism/cylinder, ba height
b) does not



- a) 756 cm^3 b) 162 cm^3
- a) 400 cm^3 b) 339 cm^3 c) 960 cm^3
- 105 cm^3
- a) Both have a volume of 200 cm^3 .
b) Both have a volume of 10.5 m^3 .

- a) 7 cm b) 6.5 m

- 24.3 m^3

- The chocolate bar on the left has less chocolate.

7.2 Volume of a Prism

- b
- c
- a
- a) 540 cm^3 b) 119 m^3 c) 2560 cm^3
- a) 91.1 cm^3 b) 343 cm^3
- a) 162 cm^3 b) 63.8 m^3 c) 120 m^3
- a) 384 cm^3 b) 672 m^3 c) 39 cm^3
- The taller container on the left contains more juice.
- 7.2 m^3

7.3 Volume of a Cylinder

- circle
- area, circle
- volume, cylinder, area
- a) 2119.5 cm^3 b) 2034.72 cm^3 c) 0.15 m^3
- a) 1538.6 cm^3 b) 14.47 m^3
- a) 1695.6 cm^3 b) 3229.49 cm^3
c) 113.04 m^3 d) 5000.45 cm^3
- a) 471 cm^3 b) 8 cm
- 0.064 m^3

7.4 Solving Problems Involving Prisms and Cylinders

- a) prisms, cylinders b) formula c) diagram
- calculations
- a) Diagrams will vary. b) 22
- a) 788.53 cm^3 b) 938.47 cm^3
- 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.

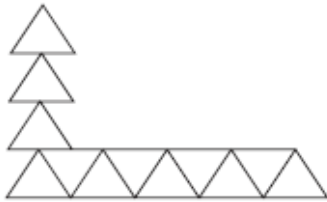
Height of triangle = 3 cm

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

7 Link It Together

1. a) Answers will vary depending on the beads selected.
- b) Favourites = 1.51 cm^3 , Characteristics = 3.94 cm^3 , Hobbies = 0.97 cm^3 , Goals = 0.94 cm^3
- c) Answers will vary depending on design.

7 Vocabulary Link

1. d) orientation
2. f) right prism
3. a) area
4. g) volume
5. c) height
6. e) right cylinder
7. b) base of a prism

