Chapter 5 BLM Answers

BLM 5–1 Chapter 5 Math Link Introduction

1. Answers will vary. Example: residential, commercial, industrial

2. Answers will vary. Examples:
- hospital; commercial; square, rectangle
- house; residential; square, triangle, rectangle

3. Answers will vary. Example: fire hydrants, telephone wires, roads, sidewalks, trees

4. Ensure students accurately sketch an aerial view of the community, including essential buildings and other features.

BLM 5–2 Chapter 5 Get Ready

1.

Name	Faces	Edges	Vertices
a) rectangular prism	6	12	8
b) triangular prism	5	9	6
c) cube	6	12	8

2. a) 22 cm **b)** 12.6 cm
3. a) 50.2 cm^2 **b)** 12.6 cm^2
4. a) 16.5 cm^2 **b)** 20 cm^2
5. a) 17.5 cm^2 **b)** 30 cm^2
6. a) 26.3 cm^2 **b)** 50 cm^2

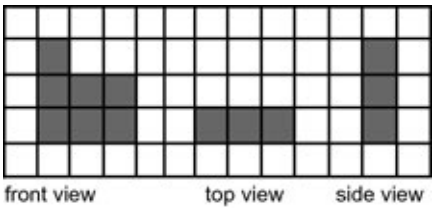
BLM 5–3 Chapter 5 Warm-Up

Section 5.1

1. 63.5% **2.** 2.49 **3.** 0.375
4. Front End Estimate: \$75 + \$7.50 = \$83.50
Relative Size Estimate: \$75 + \$7.50 + \$3.75 = \$86.25. Calculate: \$83.25
5. 169 **6.** $\frac{13}{40}$
7. 1% = \$100; 0.5% = \$50; 2.5% = \$250
8. 1% = \$5; $\frac{1}{2}$% = \$2.50
9. 1% = 2.5; $\frac{1}{4}$% ≈ 0.6; $1\frac{1}{4}$% ≈ 3.1
10. 10% = \$14.90; 5% = \$7.45

Section 5.2

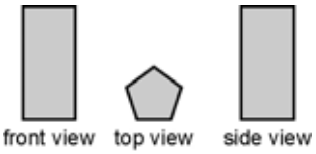
1. No. 7 × 7 = 49; 8 × 8 = 64. This is between the two perfect squares.
2. 25 m
3. Answers will vary according to the eraser. Sketches will likely show a rectangular prism.
4. If the original front view is the long face, then the second front view should be the short face.
5.



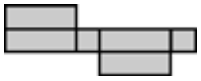
6. 10% = \$200; 5% = \$100; 1% = \$20; 0.5% = \$10; 5.5% = \$110
7. 1% = 3; $\frac{1}{4}$% ≈ 0.80; $\frac{1}{4}$% ≈ 0.8
8. □ ≈ 180 **9.** □ ≈ 36 or 40 **10.** □ ≈ 280

Section 5.3

1. 51.84 **2.** \$628.50
3.



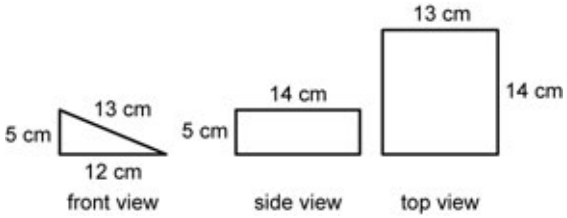
4. Because the front and side views are the same size, they will look the same as the views in #3.
5. Answers may vary. Example:



6. a triangular prism
7. 1% = \$80; 0.25% = \$20; 0.75% = \$60; 5% = \$400; 5.75% = \$460
8. 1% = \$12; 0.5% = \$6; 2.5% = \$30
9. 180° **10.** 120°

Section 5.4

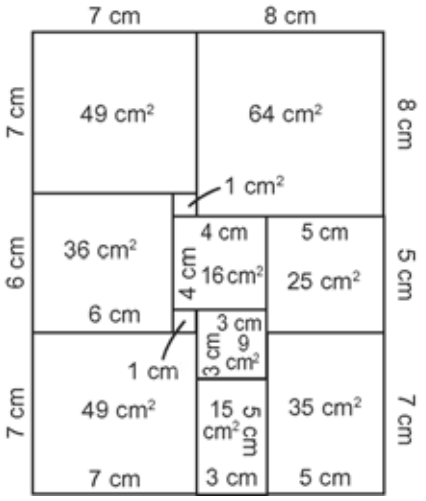
1.



2. front view = 30 cm^2; side view = 70 cm^2; top view = 182 cm^2. There are 2 rectangles of 13 × 14 = 364 cm^2. Total = 464 cm^2.
3. cylinder **4.** 72 beats/min **5.** 20% **6.** 270°
7. 10% = 250; 5% = 125; 25.75% ≈ 625
8. □ = 18 **9.** □ = 7 **10.** □ = 15

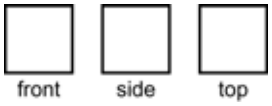
BLM 5–4 Chapter 5 Problems of the Week

1. The total surface area of the shape is: 20 cm × 15 cm = 300 cm^2.

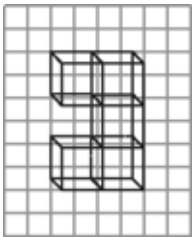


2. Answers will vary. Example: The two Hula Hoops® represent the top and bottom of the cylinder. It is easy to measure the diameter of the hoops, calculate the area, and measure the circumference (use a string). With the zipper closed, the sleeping bag curves around the hoops to form the cylinder. With the zipper open, the curved face of the cylinder can be flattened out to form a rectangle of height *h*, and length *l* equal to the circumference of the hoop. The entire surface area is a total of the area of the two circles and the rectangle, just as the formula suggests.
3. 81 cm^2. The original square was 9 cm × 9 cm, with a perimeter of 36 cm. When folded in half along one of the edges to form a rectangle, two edges become 4.5 cm, resulting in a perimeter of 2(4.5 cm + 9 cm) = 27 cm.
4. There are six possible measurements for the containers if orientation does not count: 2 cm × 2 cm × 48 cm; 4 cm × 2 cm × 24 cm; (This would be the same as 2 cm × 4 cm × 24 cm.); 6 cm × 2 cm × 16 cm; 8 cm × 2 cm × 12 cm; 4 cm × 4 cm × 12 cm; 4 cm × 6 cm × 8 cm.

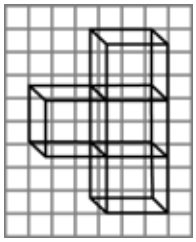
BLM 5–6 Section 5.1 Extra Practice
1. a) vertex **b)** face **c)** edge
2.



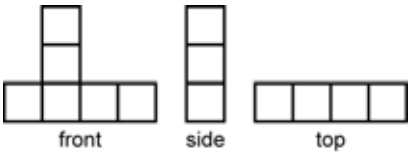
3. a)



b)

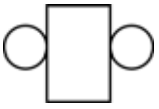


4.

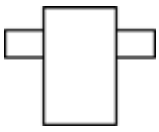


BLM 5–7 Section 5.1 Math Link
1. Answers will vary. Example: house; residential; square, rectangle, triangle
2., **3.** Look for accuracy in drawings.

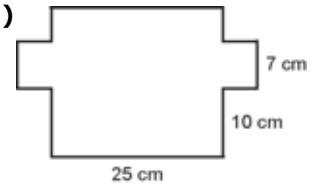
BLM 5–9 Section 5.2 Extra Practice
1. a) two **b)** three
2. a)



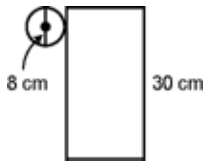
b)



3. a)



b)

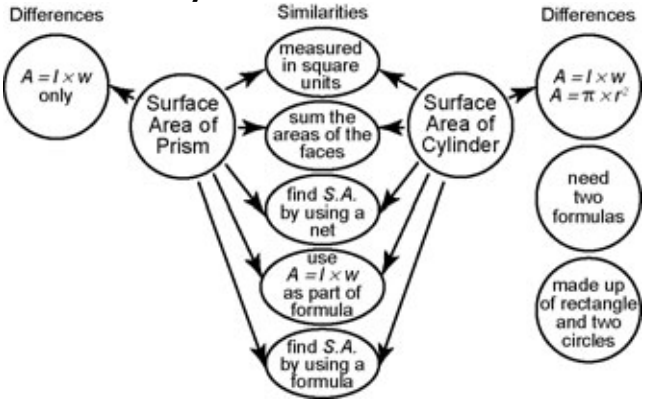


4.

BLM 5–10 Section 5.2 Math Link
1. a), 2. a) Look for an accurate 3-D sketch.
1. b), 2. b) Ensure students accurately draw a net of the building and label the measurements.

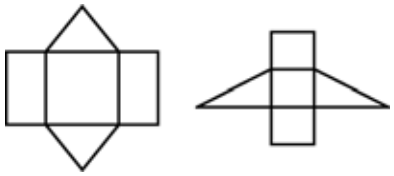
BLM 5–11 Section 5.3 Extra Practice
1. count or add; area; sum or total
2. a) 6 **b)** 392.0 cm^2; 134.4 cm^2; 210.0 cm^2
c) 736.4 cm^2
3. a) 5 **b)** 12.8 cm^2; 73.4 cm^2; 28.8 cm^2
c) 115 cm^2
4. a) 6 **b)** rectangle; triangle **c)** 72.5 m^2

BLM 5–13 Compare the Surface Area of a Prism and a Cylinder



BLM 5–14 Section 5.4 Extra Practice
1. a) rectangle, circles **b)** diameter **2.** half
3. $S.A. = 2 \times (\pi \times r^2) + (\pi \times d \times h)$
4. Answers may vary. Example:
a) 75 cm^2; 150 cm^2; 180 cm^2; 330 cm^2
b) 108 cm^2; 216 cm^2; 360 cm^2; 576 cm^2
c) 300 cm^2; 600 cm^2; 1000 cm^2; 1600 cm^2
5. a) 345.4 cm^2 **b)** 720.31 cm^2 **c)** 1888.21 cm^2

BLM 5-16 Chapter 5 Test
1. D **2.** B **3.** A **4.** C **5.** A
6.



7. 152.3 cm^2 **8.** 158.3 cm^2
9. Answers may vary. Example:
a) Container 1: 4 × 3 × 2; *S.A.* = 1608.16 cm^2
Container 2: 3 × 2 × 4; 1453.12 cm^2
b) Ensure students justify their choice.
10. Paint *S.A.* = 55.04 m^2; cost: \$51; Carpet *S.A.* = 15.54 m^2; cost: \$528.36. Total cost = \$579.36