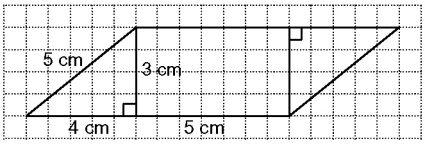
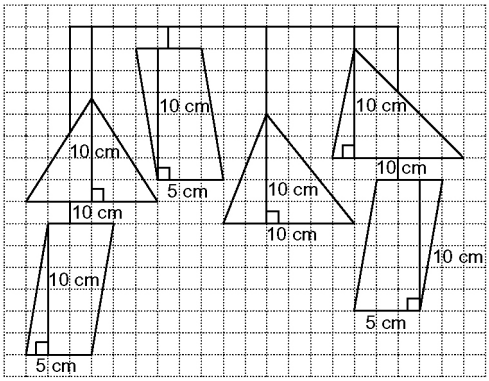
Chapter 3 Problems of the Week Answers

1. a) Answers may vary. Example: The right triangles have dimensions of 3 cm, 4 cm, and 5 cm. The rectangle has dimensions of 3 cm by 5 cm.

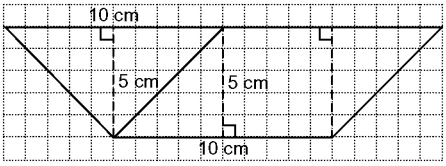


b) Answers may vary. Using the example in a), the area is 27 cm^2.

2. Answers may vary. Example: The triangle pieces are h = 10 cm and b = 10 cm; the parallelogram pieces are h = 10 cm and b = 5 cm.



3. a) Answers will vary. Example: The height for both the triangle and the parallelogram is 5 cm.



b) The height of the two shapes must be the same.

c) There must be two triangles for each parallelogram.

4. a), b) Answers will vary. There are many possibilities since there are no criteria for dimensions. Students could simply draw a triangle and fill in its area with triangles and parallelograms. Check for correct shapes, correctly labelled parallel and perpendicular lines, and a correctly drawn angle bisector.

5. a) 0 pairs of parallel faces; 0 pairs of parallel edges

b) 3 pairs of parallel faces; 12 pairs of parallel edges

c) 4 pairs of parallel faces; 4 pairs of parallel edges

6. a) 0 pairs of parallel faces; 0 pairs of parallel edges

b) 0 pairs of parallel faces; 2 pairs of parallel edges

c) 0 pairs of parallel faces; 0 pairs of parallel edges

d) 0 pairs of parallel faces; 3 pairs of parallel edges

7. a) 1 pair of parallel faces, 3 pairs of parallel edges. Note: If the edges are called A, B, and C, then the pairs are AB, AC, and BC.

b) 1 pair of parallel faces, 12 pairs of parallel edges

c) 1 pair of parallel faces, 10 pairs of parallel edges

d) 1 pair of parallel faces, 33 pairs of parallel edges

8. a) 2 pairs of parallel edges

b) 1 pair of parallel faces