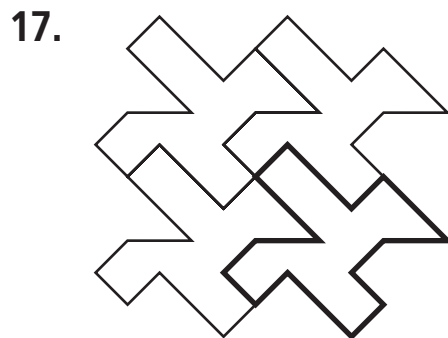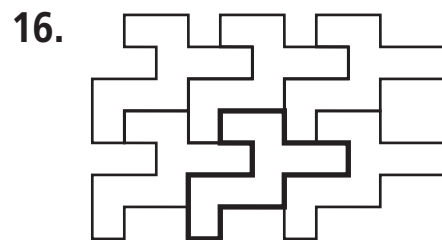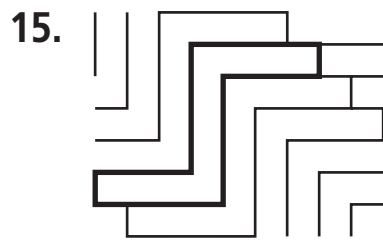## Answers for Lesson 9-7, pp. 518–520 Exercises

**1–4. Answers may vary. Samples are given.**

1. yes; translation; two ⊥ rectangles

2. yes; translation; two ⊠ and a rhombus with a flower in it

3. yes; translation; four rectangles in a square shape

4. yes; translation; from upper left corner, 5 rectangles down and full width

5. yes

6. yes

7. no

8. no

9. no

10. no

11. rotational, reflectional, glide reflectional, and translational

12. rotational, point, reflectional, glide reflectional, and translational

13. rotational, reflectional, glide reflectional, and translational

14. rotational and reflectional

15.

16.

17.

18. C

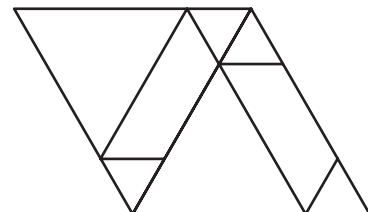**19–21. Answers may vary. Samples are given.**

19.

20.

21.
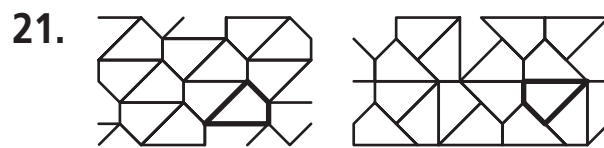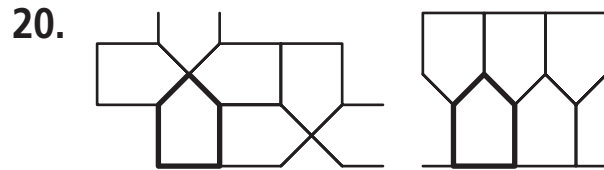
22. A regular polygon with more than 6 sides must have ∠ measures greater than 120, and at least 3 polygons must meet at each vertex. The sum of 3 or more ⧍s with measures greater than 120 > 360. So the 3 regular polygons are 3-, 4-, and 6-sided, since their int. ∠ measures divide 360.
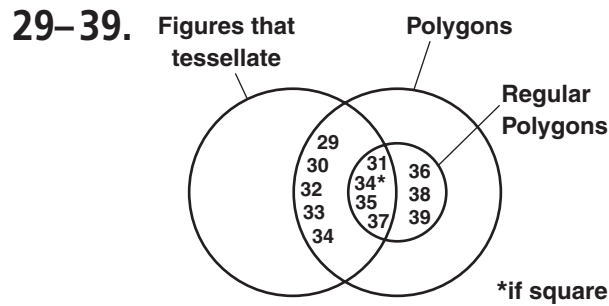
23. no

24. yes;
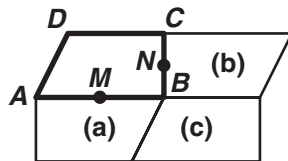
25. yes;
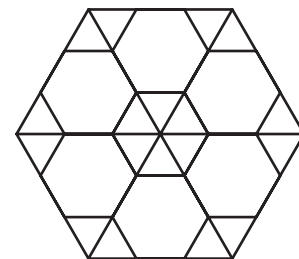
26. yes;

27. reflectional, glide reflectional, rotational, and translational

28. rotational, point, reflectional, glide reflectional, and translational

29–39. **Figures that tessellate** **Polygons**

40. **a–c.** Drawings may vary. Sample:

 d. Yes, $ABCD$ tessellates; the sum of the measures of the ∠s of a quad. is 360. Copies of the quad. can be arranged so that the four ∠s share a vertex. The quad. fills the plane.

41. Answers may vary. Sample: Draw $\triangle ABC$. Locate M, the mdpt. of $\overline{AB}$, and N, the mdpt. of $\overline{BC}$. Draw the images of $\triangle ABC$ under 180° rotations about M and N. Draw the image of $\triangle ABC$ under the translation that maps A to C. 2nd way: Draw $\triangle ABC$. Draw the reflection image of pt. C over $\overline{AB}$, C'. Now use the steps from Ex. 38 for quad. $ACBC'$.