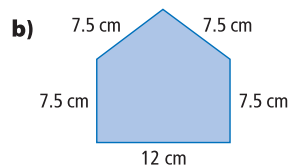


14. a) $\frac{1}{20}$



c) length_{model} = 15 cm, width_{model} = 12 cm

15. 19 250 L

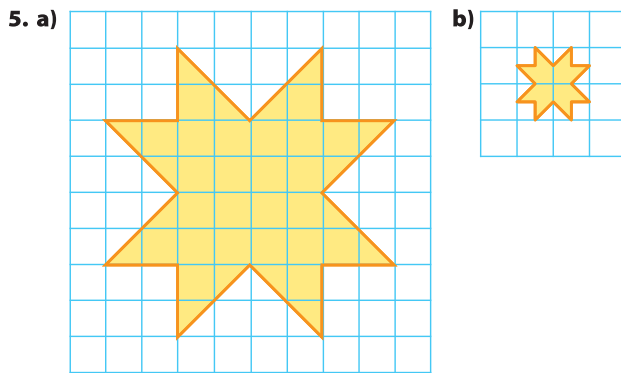
16. The ratio of areas to the ratio of corresponding side lengths in similar polygons is equal to the scale factor comparing side lengths squared.

17. The volume ratio is the same as the side ratio cubed.

18. a) The similar polygons have 7 sides, so they are heptagons. b) Example: Each heptagon is a reduction of the centre heptagon, with the scale factor decreasing with distance from the centre.

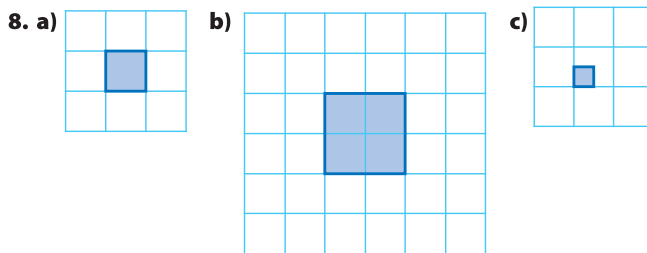
Chapter 4 Review, pages 160–161

1. POLYGON
2. SIMILAR
3. SCALE FACTOR
4. PROPORTION



6. The vertical height of the drawing is 3 cm. The enlarged egg will have a vertical height of 9 cm.

7. The vertical height of the drawing is 3 cm. The reduced drawing will have a vertical height of 1.5 cm.



9. $\frac{2}{13}$

10. a) 14 cm b) 13.9 cm

11. 8.7 cm

12. $\frac{1}{10\,000\,000}$

13. No. The corresponding sides are not proportional.

14. $x = 10$

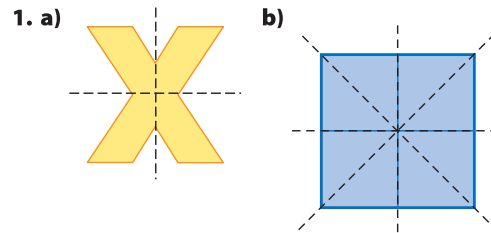
15. $x = 3$

16. The polygons are not similar.

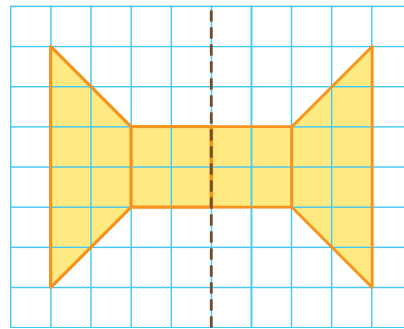
17. 10.1 cm

18. $x = 7.2$; $y = 9.6$

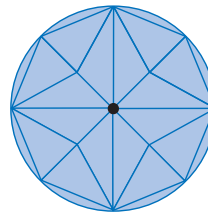
Chapters 1–4 Review, pages 166–168



2. Example: The shape could be traced and cut out, then flipped over the dashed line and traced as the reflected image or each point could be reflected over the dashed line and connected to create the shape.



3. a) Example: There are four lines of symmetry, 1 vertical, 1 horizontal and 2 oblique. b) Example: 4 c) 90° , $\frac{1}{4}$ revolution



4. a) Example: Diameter of circular cake and side length of square cake are 25 cm. Height of both cakes is 10 cm. Square: 1625 cm^2 , circle: 1276.5 cm^2

b) Example: Square: 2625 cm^2 , an increase of 61.5%. Circle: 2276.3 , an increase of 78.3%.