UNIT H3 *Constructions and Loci* Mental Maths Questions

M H3

1. How many lines of symmetry does a square have? (4)

2. What is the order of rotational symmetry of a 2 cm × 3 cm rectangle? (2)

3. A square, of side length 4 cm, is enlarged with scale factor 2.5.
   What is the new length of the side? (10 cm)

4. How many lines of symmetry does an equilateral triangle have? (3)

5. If the side of a square of length 3 cm is enlarged to 9 cm, what is the scale factor of the enlargement? (3)

6. If a line of length 9 cm becomes 6 cm after enlargement, what is the scale factor of this enlargement? $\left(\frac{2}{3}\right)$

7. The length of a line was 10 cm. After an enlargement, its length is 15 cm.

   What is the scale factor of this enlargement? $\left(\frac{3}{2}\right)$

8. The square with coordinates $(0, 0)$, $(1, 0)$, $(1, 1)$ and $(0, 1)$ is enlarged with scale factor 2. What are the transformed coordinates of the point $(1, 1)$? $(2, 2)$

9. The length of a line is 10 cm. After an enlargement its length is 5 cm.

   What is the scale factor of this enlargement? $\left(\frac{1}{2}\right)$

10. The square with coordinates $(0, 0)$, $(1, 0)$, $(1, 1)$ and $(0, 1)$ is enlarged with scale factor 3.
    What are the transformed coordinates of the point $(0, 1)$? $(0, 3)$

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