

Varied Fluency

Step 8: Calculate Perimeter

National Curriculum Objectives:

Mathematics Year 3: (3M7) [Measure the perimeter of simple 2-D shapes](#)

Differentiation:

Developing Questions to support calculating the perimeter of regular polygons using cm where all the lengths are given.

Expected Questions to support calculating the perimeter of regular polygons, triangles and rectangles using cm or mm, where not all the lengths are given.

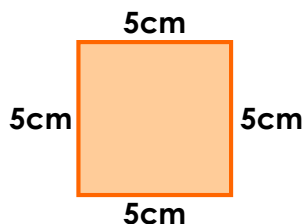
Greater Depth Questions to support calculating the perimeter of regular and irregular polygons where some conversions between mm and cm are used and where not all the lengths are given.

More [Year 3 Length and Perimeter](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Calculate Perimeter

1a. Complete the calculations to work out the perimeter of the square.



Not drawn to scale

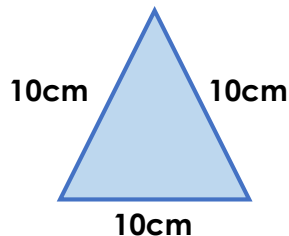
$$5\text{cm} + 5\text{cm} + 5\text{cm} + 5\text{cm} = \square$$

$$5\text{cm} \times 4 = \square$$

VF

Calculate Perimeter

1b. Complete the calculations to work out the perimeter of the triangle.



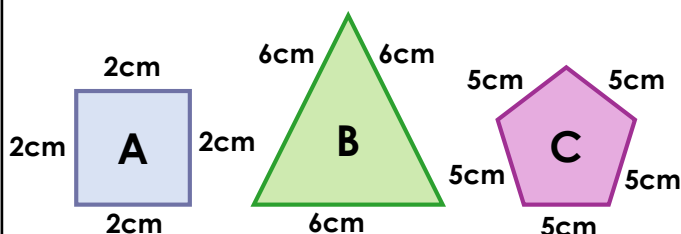
Not drawn to scale

$$10\text{cm} + 10\text{cm} + 10\text{cm} = \square$$

$$10\text{cm} \times 3 = \square$$

VF

2a. Match the shapes to their perimeters.



25cm

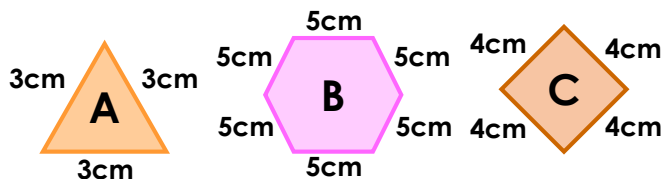
18cm

8cm

Not drawn to scale

VF

2b. Match the shapes to their perimeters.



30cm

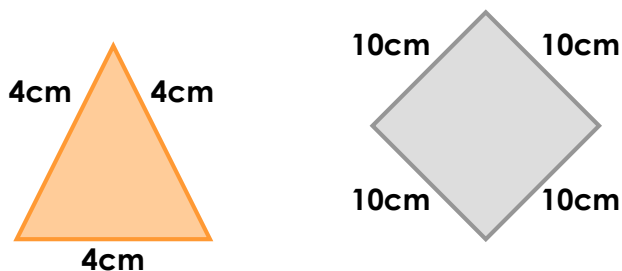
16cm

9cm

Not drawn to scale

VF

3a. Circle the calculation that does NOT find the perimeter of one of the shapes.



A. $10\text{cm} + 10\text{cm} + 10\text{cm} + 10\text{cm}$

B. $4\text{cm} \times 3$

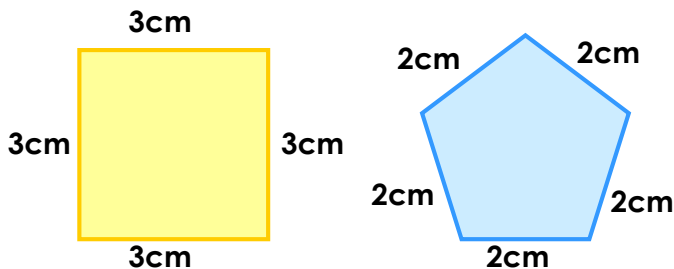
C. $4\text{cm} + 4\text{cm} + 4\text{cm} + 4\text{cm}$

D. $10\text{cm} \times 4$

Not drawn to scale

VF

3b. Circle the calculation that does NOT find the perimeter of one of the shapes.



A. $2\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm}$

B. $2\text{cm} \times 4$

C. $3\text{cm} \times 4$

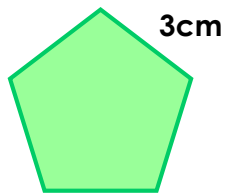
D. $3\text{cm} + 3\text{cm} + 3\text{cm} + 3\text{cm}$

Not drawn to scale

VF

Calculate Perimeter

4a. Complete the calculations to work out the perimeter of the regular pentagon.



Not drawn to scale

$$3\text{cm} + \square + \square + 3\text{cm} + \square = \square$$

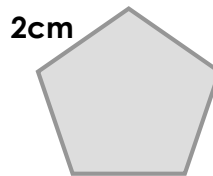
$$3\text{cm} \times \square = \square$$



VF

Calculate Perimeter

4b. Complete the calculations to work out the perimeter of the regular pentagon.



Not drawn to scale

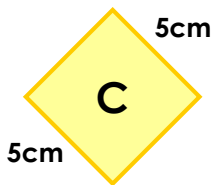
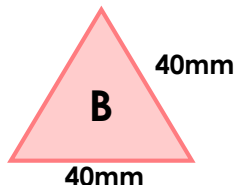
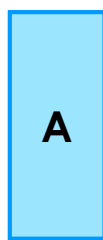
$$\square + 2\text{cm} + \square + 2\text{cm} + \square = \square$$

$$\square \times 5 = \square$$



VF

5a. Match the shapes to their perimeters.



20cm

120mm

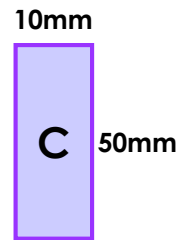
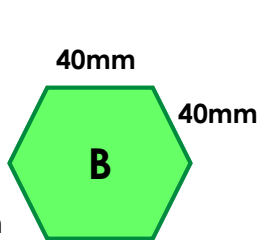
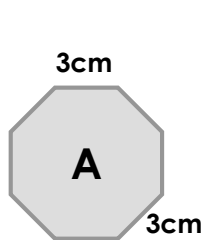
16cm

Not drawn to scale



VF

5b. Match the shapes to their perimeters.



240mm

24cm

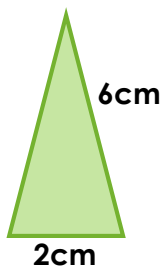
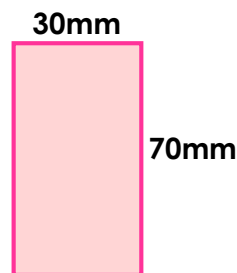
120mm

Not drawn to scale



VF

6a. Circle the calculation that does NOT find the perimeter of one of the shapes.



A. $4\text{cm} \times 10$

B. $6\text{cm} + 2\text{cm} + 6\text{cm}$

C. $70\text{mm} + 70\text{mm} + 30\text{mm} + 30\text{mm}$

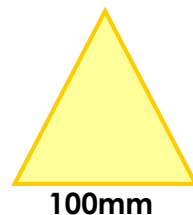
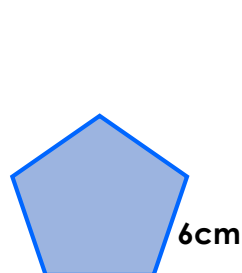
D. $6\text{cm} \times 2\text{cm} \times 6\text{cm}$

Not drawn to scale



VF

6b. Circle the calculation that does NOT find the perimeter of one of the shapes.



A. $8\text{cm} \times 4$

B. $100\text{mm} + 100\text{mm} + 100\text{mm}$

C. $8\text{cm} + 8\text{cm} + 4\text{cm} + 4\text{cm}$

D. $6\text{cm} \times 5$

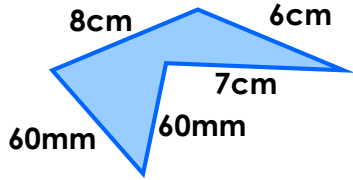
Not drawn to scale



VF

Calculate Perimeter

7a. Complete the calculations to work out the perimeter of the irregular pentagon.



Not drawn to scale

$$\boxed{} + 6\text{cm} + \boxed{} = 18\text{cm}$$

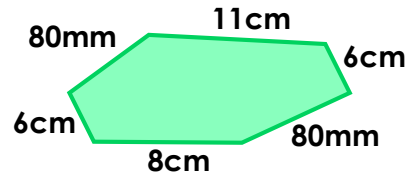
$$18\text{cm} + \boxed{} + \boxed{} = \boxed{}$$



VF

Calculate Perimeter

7b. Complete the calculations to work out the perimeter of the irregular hexagon.



Not drawn to scale

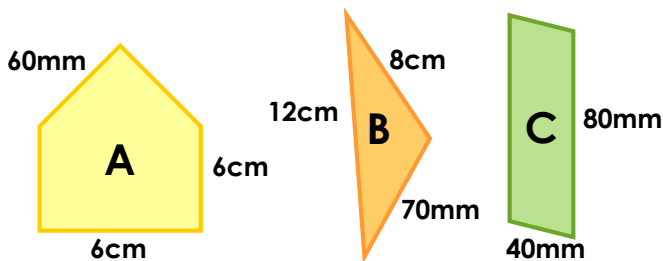
$$\boxed{} + 8\text{cm} + \boxed{} = 24\text{cm}$$

$$24\text{cm} + \boxed{} + \boxed{} + \boxed{} = \boxed{}$$



VF

8a. Match the shapes to their perimeters.



270mm

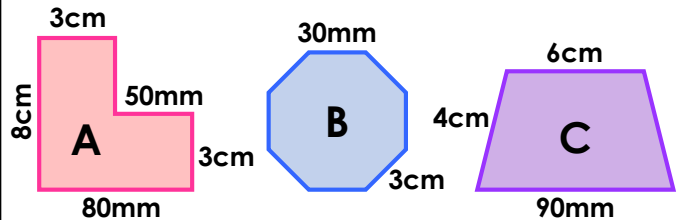
24cm

30cm

Not drawn to scale

VF

8b. Match the shapes to their perimeters.



23cm

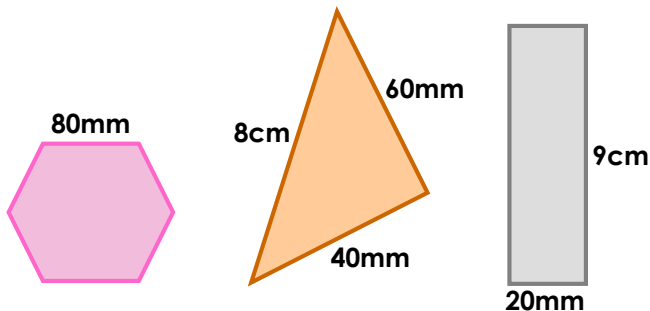
320mm

240mm

Not drawn to scale

VF

9a. Circle the calculation that does NOT find the perimeter of one of the shapes.



A. $9\text{cm} + 9\text{cm} + 20\text{mm} + 20\text{mm}$

B. $29\text{cm} \times 2$

C. $8\text{cm} \times 6$

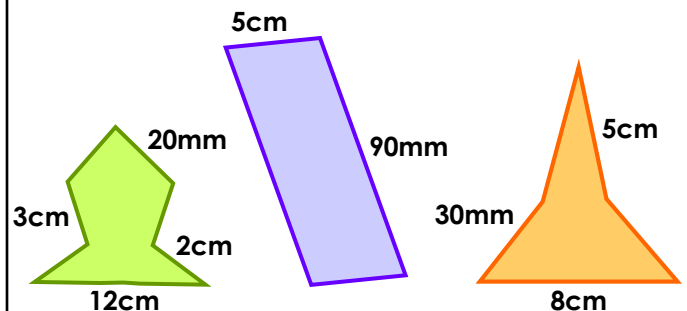
D. $40\text{mm} + 140\text{mm}$



Not drawn to scale

VF

9b. Circle the calculation that does NOT find the perimeter of one of the shapes.



A. $180\text{mm} + 100\text{mm}$

B. $80\text{mm} + 60\text{mm} + 100\text{mm}$

C. $12\text{cm} + 4\text{cm} + 6\text{cm} + 4\text{cm}$

D. $80\text{mm} + 30\text{mm} + 50\text{cm}$



Not drawn to scale

VF

Varied Fluency Calculate Perimeter

Developing

1a. 20cm, 20cm

2a. A = 8cm, B = 18cm, C = 25cm

3a. C

Expected

4a. $3\text{cm} + 3\text{cm} + 3\text{cm} + 3\text{cm} + 3\text{cm} = 15\text{cm}$, $3\text{cm} \times 5 = 15\text{cm}$

5a. A = 16cm, B = 120mm, C = 20cm

6a. D

Greater Depth

7a. (in cm) $6\text{cm} + 6\text{cm} + 6\text{cm} = 18\text{cm}$,
 $18\text{cm} + 7\text{cm} + 8\text{cm} = 33\text{cm}$

(in mm) $60\text{mm} + 6\text{cm} + 60\text{mm} = 18\text{cm}$,
 $18\text{cm} + 70\text{mm} + 80\text{mm} = 330\text{mm}$

8a. A = 30cm, B = 270mm, C = 24cm

9a. B

Varied Fluency Calculate Perimeter

Developing

1b. 30cm, 30cm

2b. A = 9cm, B = 30cm, C = 16cm

3b. B

Expected

4b. $2\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm} = 10\text{cm}$, $2\text{cm} \times 5 = 10\text{cm}$

5b. A = 24cm, B = 240mm, C = 120mm

6b. A

Greater Depth

7b. (in cm) $8\text{cm} + 8\text{cm} + 8\text{cm} = 24\text{cm}$,
 $24\text{cm} + 6\text{cm} + 6\text{cm} + 11\text{cm} = 47\text{cm}$

(in mm) $80\text{mm} + 8\text{cm} + 80\text{mm} = 24\text{cm}$
 $24\text{cm} + 60\text{mm} + 60\text{mm} + 110\text{mm} = 470\text{mm}$

8b. A = 320mm, B = 240mm, C = 23cm

9b. D