

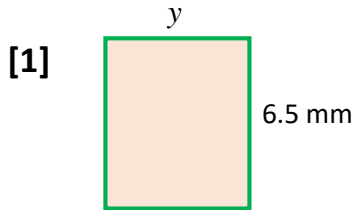
## Perimeter (rectangles): Use perimeter to find missing side length

<http://www.learnersgrid.com>

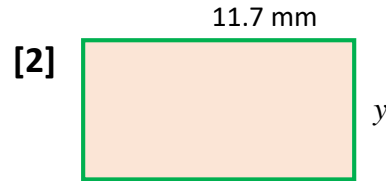
Date:

Name:

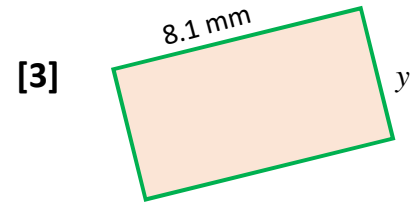
Use formulae, " $P = 2(L + w)$ " or " $P = 2L + 2W$ ", and the given perimeter of each rectangle to calculate the missing side length - and show ALL YOUR WORKING! Round to 1 d.p. **You should use your calculator!**



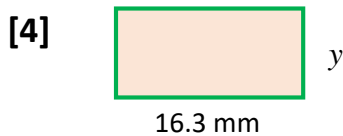
length of  $y = ?$   
perimeter = 20 mm



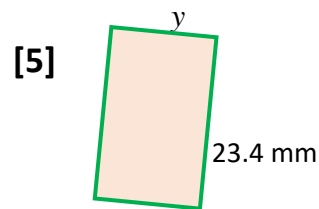
length of  $y = ?$   
perimeter = 38.8 mm



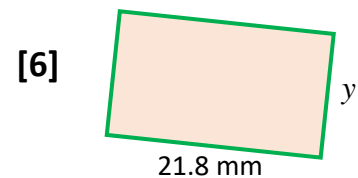
length of  $y = ?$   
perimeter = 26.4 mm



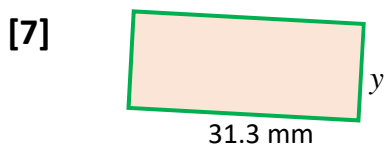
length of  $y = ?$   
perimeter = 73.2 mm



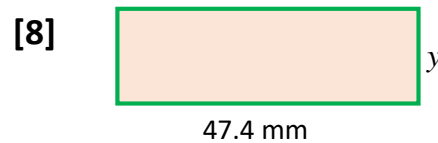
length of  $y = ?$   
perimeter = 87.6 mm



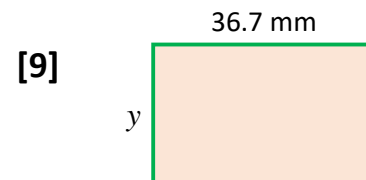
length of  $y = ?$   
perimeter = 79.2 mm



length of  $y = ?$   
perimeter = 107.2 mm



length of  $y = ?$   
perimeter = 165.6 mm



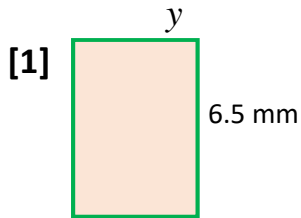
length of  $y = ?$   
perimeter = 138.8 mm

# ANSWERS

## Perimeter (rectangles): Use perimeter to find missing side length

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Use formulae, " $P = 2(L + w)$ " or " $P = 2L + 2W$ ", and the given perimeter of each rectangle to calculate the missing side length - and show ALL YOUR WORKING! Round to 1 d.p. You should use your calculator!



side  $y$  length = 3.5 mm

Worked Solution:

$$P = 2(L + W)$$

$$20 = 2(6.5 + y)$$

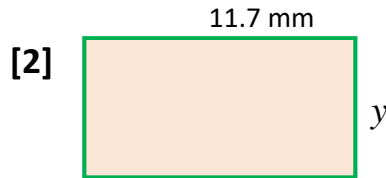
$$- 13 \quad 20 = 13 + 2y \quad - 13$$

$$7 = 2y$$

$$7/2 = 2y/2 \quad 3.5$$

$$3.5 = y$$

$y = 3.5 \text{ mm}$



side  $y$  length = 7.7 mm

Worked Solution:

$$P = 2(L + W)$$

$$38.8 = 2(11.7 + y)$$

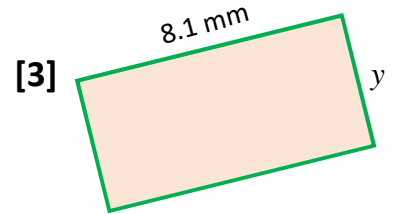
$$- 23.4 \quad 38.8 = 23.4 + 2y \quad - 23.4$$

$$15.4 = 2y$$

$$15.4/2 = 2y/2 \quad 7.7$$

$$7.7 = y$$

$y = 7.7 \text{ mm}$



side  $y$  length = 5.1 mm

Worked Solution:

$$P = 2(L + W)$$

$$26.4 = 2(8.1 + y)$$

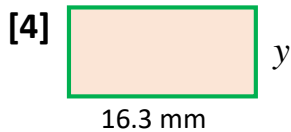
$$- 16.2 \quad 26.4 = 16.2 + 2y \quad - 16.2$$

$$10.2 = 2y$$

$$10.2/2 = 2y/2 \quad 5.1$$

$$5.1 = y$$

$y = 5.1 \text{ mm}$



side length = 20.3 mm

Worked Solution:

$$P = 2(L + W)$$

$$73.2 = 2(16.3 + y)$$

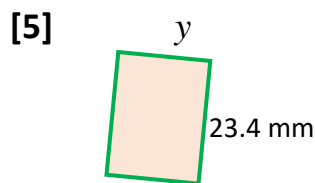
$$- 40.6 \quad 73.2 = 32.6 + 2y \quad - 40.6$$

$$40.6 = 2y$$

$$40.6/2 = 2y/2 \quad 20.3$$

$$20.3 = y$$

$y = 20.3 \text{ mm}$



side length = 20.4 mm

Worked Solution:

$$P = 2(L + W)$$

$$87.6 = 2(23.4 + y)$$

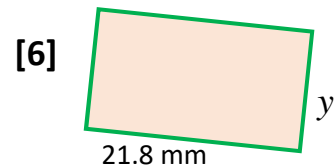
$$- 46.8 \quad 87.6 = 46.8 + 2y \quad - 46.8$$

$$40.8 = 2y$$

$$40.8/2 = 2y/2 \quad 20.4$$

$$20.4 = y$$

$y = 20.4 \text{ mm}$



side length = 17.8 mm

Worked Solution:

$$P = 2(L + W)$$

$$79.2 = 2(21.8 + y)$$

$$- 43.6 \quad 79.2 = 43.6 + 2y \quad - 43.6$$

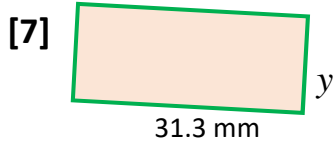
$$35.6 = 2y$$

$$35.6/2 = 2y/2 \quad 17.8$$

$$17.8 = y$$

$y = 17.8 \text{ mm}$

## ANSWERS (page 2)



side length = 22.3 mm

Worked Solution:

$$P = 2(L + W)$$

$$107.2 = 2(31.3 + y)$$

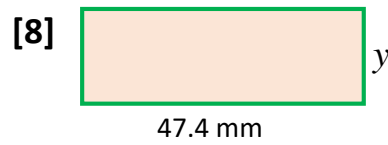
$$- 62.6 \quad 107.2 = 62.6 + 2y \quad - 62.6$$

$$44.6 = 2y$$

$$44.6/2 = 2y/2 \quad 22.3$$

$$22.3 = y$$

$$y = 22.3 \text{ mm}$$



side length = 35.4 mm

Worked Solution:

$$P = 2(L + W)$$

$$165.6 = 2(47.4 + y)$$

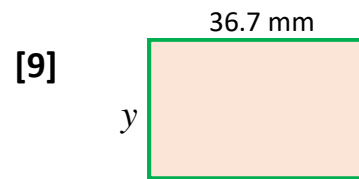
$$- 94.8 \quad 165.6 = 94.8 + 2y \quad - 94.8$$

$$70.8 = 2y$$

$$70.8/2 = 2y/2 \quad 35.4$$

$$35.4 = y$$

$$y = 35.4 \text{ mm}$$



side length = 32.7 mm

Worked Solution:

$$P = 2(L + W)$$

$$138.8 = 2(36.7 + y)$$

$$- 73.4 \quad 138.8 = 73.4 + 2y \quad - 73.4$$

$$65.4 = 2y$$

$$65.4/2 = 2y/2 \quad 32.7$$

$$32.7 = y$$

$$y = 32.7 \text{ mm}$$