

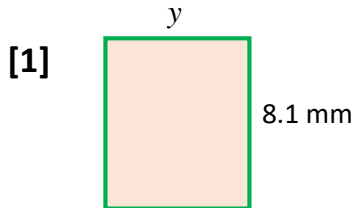
## Perimeter (rectangles): Use perimeter to find missing side length

<http://www.learnersgrid.com>

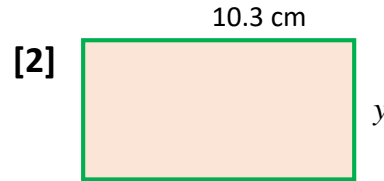
Date:

Name:

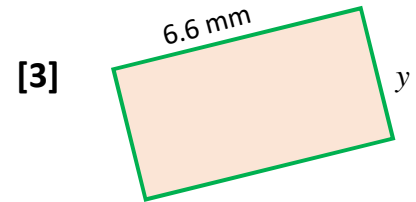
Use formulae, " $P = 2(L + w)$ " or " $P = 2L + 2W$ ", and the given perimeter of each rectangle to calculate the missing side length - and show ALL YOUR WORKING! Round to 1 d.p. **You should use your calculator!**



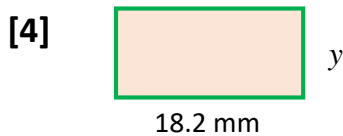
length of  $y = ?$   
perimeter = 20.4 mm



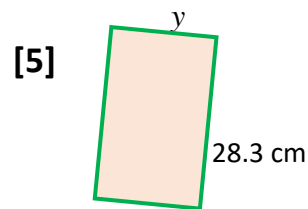
length of  $y = ?$   
perimeter = 33.2 cm



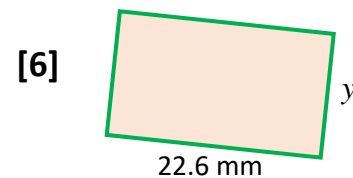
length of  $y = ?$   
perimeter = 20.4 mm



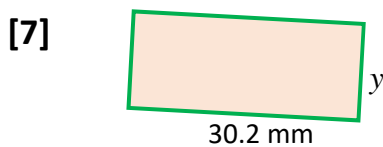
length of  $y = ?$   
perimeter = 82.8 mm



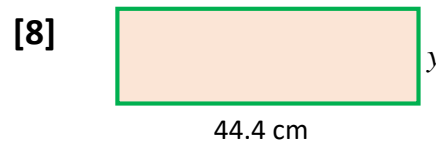
length of  $y = ?$   
perimeter = 101.2 cm



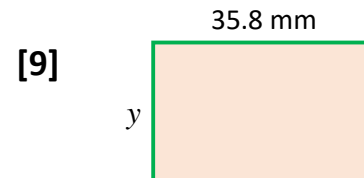
length of  $y = ?$   
perimeter = 84.4 mm



length of  $y = ?$   
perimeter = 102.8 mm



length of  $y = ?$   
perimeter = 157.6 cm



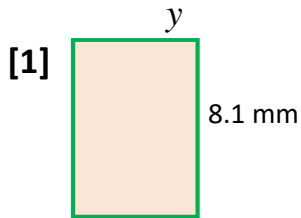
length of  $y = ?$   
perimeter = 135.2 mm

# 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 = 2.1 mm

Worked Solution:

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

$$20.4 = 2(8.1 + y)$$

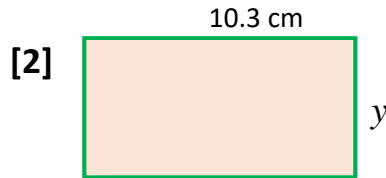
$$-16.2 \quad 20.4 = 16.2 + 2y \quad -16.2$$

$$4.2 = 2y$$

$$4.2/2 = 2y/2 \quad 2.1$$

$$2.1 = y$$

$y = 2.1 \text{ mm}$



side  $y$  length = 6.3 cm

Worked Solution:

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

$$33.2 = 2(10.3 + y)$$

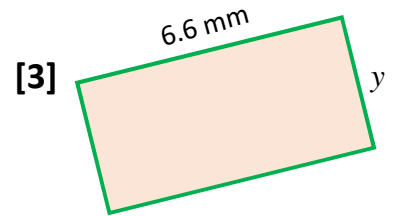
$$-20.6 \quad 33.2 = 20.6 + 2y \quad -20.6$$

$$12.6 = 2y$$

$$12.6/2 = 2y/2 \quad 6.3$$

$$6.3 = y$$

$y = 6.3 \text{ cm}$



side  $y$  length = 3.6 mm

Worked Solution:

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

$$20.4 = 2(6.6 + y)$$

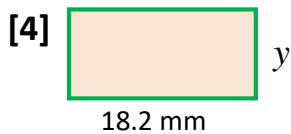
$$-13.2 \quad 20.4 = 13.2 + 2y \quad -13.2$$

$$7.2 = 2y$$

$$7.2/2 = 2y/2 \quad 3.6$$

$$3.6 = y$$

$y = 3.6 \text{ mm}$



side length = 23.2 mm

Worked Solution:

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

$$82.8 = 2(18.2 + y)$$

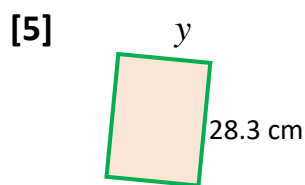
$$-46.4 \quad 82.8 = 36.4 + 2y \quad -46.4$$

$$46.4 = 2y$$

$$46.4/2 = 2y/2 \quad 23.2$$

$$23.2 = y$$

$y = 23.2 \text{ mm}$



side length = 22.3 cm

Worked Solution:

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

$$101.2 = 2(28.3 + y)$$

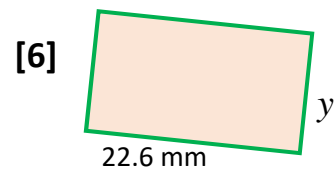
$$-56.6 \quad 101.2 = 56.6 + 2y \quad -56.6$$

$$44.6 = 2y$$

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

$$22.3 = y$$

$y = 22.3 \text{ cm}$



side length = 19.6 mm

Worked Solution:

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

$$84.4 = 2(22.6 + y)$$

$$-45.2 \quad 84.4 = 45.2 + 2y \quad -45.2$$

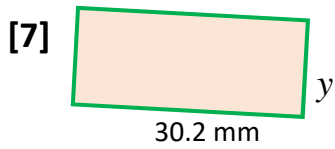
$$39.2 = 2y$$

$$39.2/2 = 2y/2 \quad 19.6$$

$$19.6 = y$$

$y = 19.6 \text{ mm}$

## ANSWERS (page 2)



$$\text{side length} = 21.2 \text{ mm}$$

Worked Solution:

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

$$102.8 = 2(30.2 + y)$$

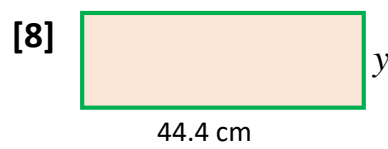
$$- 60.4 \quad 102.8 = 60.4 + 2y \quad - 60.4$$

$$42.4 = 2y$$

$$42.4/2 = 2y/2 \quad 21.2$$

$$21.2 = y$$

$$y = 21.2 \text{ mm}$$



$$\text{side length} = 34.4 \text{ cm}$$

Worked Solution:

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

$$157.6 = 2(44.4 + y)$$

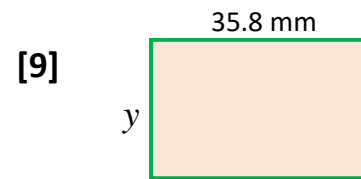
$$- 88.8 \quad 157.6 = 88.8 + 2y \quad - 88.8$$

$$68.8 = 2y$$

$$68.8/2 = 2y/2 \quad 34.4$$

$$34.4 = y$$

$$y = 34.4 \text{ cm}$$



$$\text{side length} = 31.8 \text{ mm}$$

Worked Solution:

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

$$135.2 = 2(35.8 + y)$$

$$- 71.6 \quad 135.2 = 71.6 + 2y \quad - 71.6$$

$$63.6 = 2y$$

$$63.6/2 = 2y/2 \quad 31.8$$

$$31.8 = y$$

$$y = 31.8 \text{ mm}$$