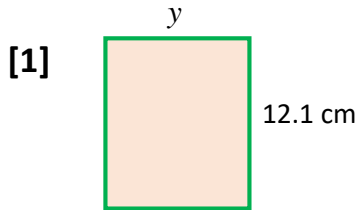# Perimeter (rectangles): Use perimeter to find missing side length
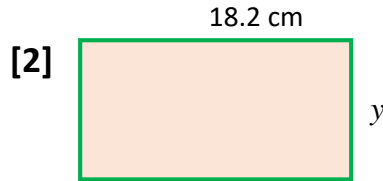
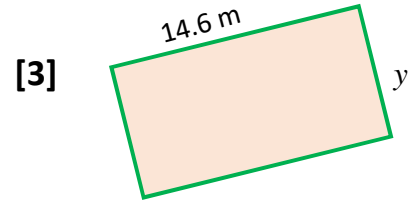**Date:**   **Name:**

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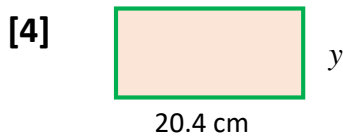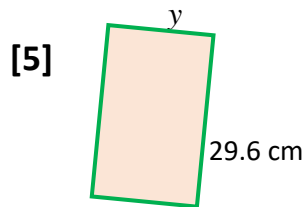
[1]

y

12.1 cm

length of y = ?
perimeter = 40.4 cm

[2]

18.2 cm

y

length of y = ?
perimeter = 60.8 cm

[3]

14.6 m

y

length of y = ?
perimeter = 48.4 m

[4]

y

20.4 cm

length of y = ?
perimeter = 93.6 cm

[5]

y

29.6 cm

length of y = ?
perimeter = 108.4 cm

[6]

y

23.9 m
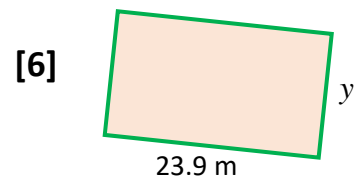
length of y = ?
perimeter = 91.6 m

[7]

y

31.1 cm
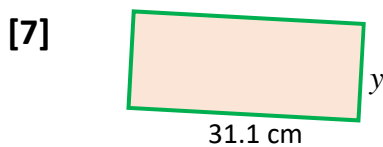
length of y = ?
perimeter = 104.4 cm

[8]

y

47.3 cm
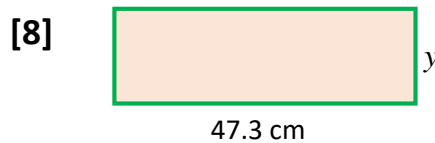
length of y = ?
perimeter = 165.2 cm
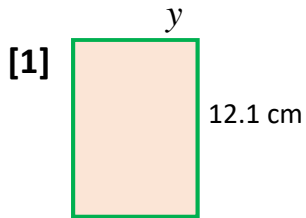
[9]

35.6 m

y
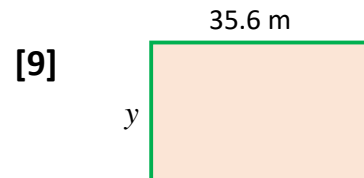
length of y = ?
perimeter = 136.4 m

ANSWERS

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

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

[1]

y

12.1 cm

side y length = 8.1 cm

Worked Solution:

P = 2(L + W)

40.4 = 2(12.1 + y)

- 24.2   40.4 = 24.2 + 2y   - 24.2

16.2 = 2y

16.2/2 = 2y/2   8.1

8.1 = y

y = 8.1 cm

[2]

18.2 cm

y
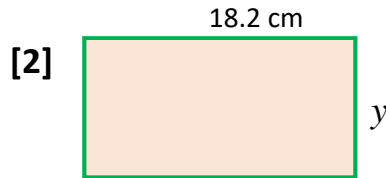
side y length = 12.2 cm

Worked Solution:

P = 2(L + W)

60.8 = 2(18.2 + y)

- 36.4   60.8 = 36.4 + 2y   - 36.4

24.4 = 2y

24.4/2 = 2y/2   12.2

12.2 = y

y = 12.2 cm

[3]

14.6 m

y
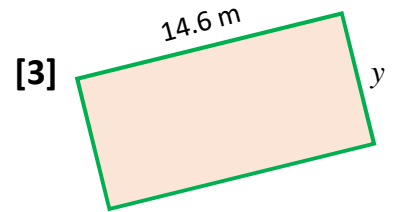
side y length = 9.6 m

Worked Solution:

P = 2(L + W)

48.4 = 2(14.6 + y)

- 29.2   48.4 = 29.2 + 2y   - 29.2

19.2 = 2y

19.2/2 = 2y/2   9.6

9.6 = y

y = 9.6 m

[4]

y

20.4 cm
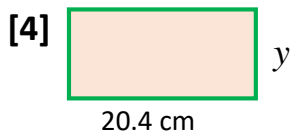
side length = 26.4 cm

Worked Solution:

P = 2(L + W)

93.6 = 2(20.4 + y)

- 52.8   93.6 = 40.8 + 2y   - 52.8

52.8 = 2y

52.8/2 = 2y/2   26.4

26.4 = y

y = 26.4 cm

[5]

y

29.6 cm
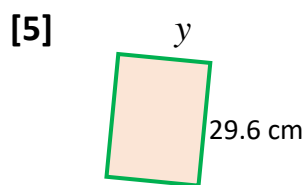
side length = 24.6 cm

Worked Solution:

P = 2(L + W)

108.4 = 2(29.6 + y)

- 59.2   108.4 = 59.2 + 2y   - 59.2

49.2 = 2y

49.2/2 = 2y/2   24.6

24.6 = y

y = 24.6 cm

[6]

y

23.9 m
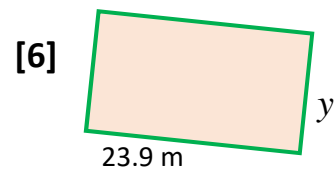
side length = 21.9 m

Worked Solution:

P = 2(L + W)

91.6 = 2(23.9 + y)

- 47.8   91.6 = 47.8 + 2y   - 47.8

43.8 = 2y

43.8/2 = 2y/2   21.9

21.9 = y

y = 21.9 m

ANSWERS (page 2)

[7]

31.1 cm

y
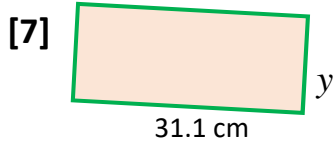
side length = 21.1 cm

Worked Solution:
P = 2(L + W)
104.4 = 2(31.1 + y)
- 62.2   104.4 = 62.2 + 2y   - 62.2
42.2 = 2y
42.2/2 = 2y/2   21.1
21.1 = y
y = 21.1 cm

[8]

47.3 cm

y
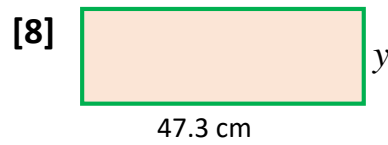
side length = 35.3 cm

Worked Solution:
P = 2(L + W)
165.2 = 2(47.3 + y)
- 94.6   165.2 = 94.6 + 2y   - 94.6
70.6 = 2y
70.6/2 = 2y/2   35.3
35.3 = y
y = 35.3 cm

[9]

35.6 m

y
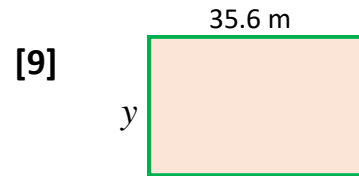
side length = 32.6 m

Worked Solution:
P = 2(L + W)
136.4 = 2(35.6 + y)
- 71.2   136.4 = 71.2 + 2y   - 71.2
65.2 = 2y
65.2/2 = 2y/2   32.6
32.6 = y
y = 32.6 m