

Homework/Extension

Step 6: Area of a Parallelogram

National Curriculum Objectives:

Mathematics Year 6: (6M7b) [Calculate the area of parallelograms and triangles](#)

Mathematics Year 6: (6M7c) [Recognise when it is possible to use formulae for the area of shapes](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Tick the correct parallelograms. Includes the use of the formula: base x perpendicular height for some questions. Whole numbers only.

Expected Tick the correct parallelograms. Includes the use of the formula: base x perpendicular height for some questions. Includes some conversions (mm to cm) and some decimals (halves only). Children to select the base and perpendicular height from given measurements.

Greater Depth Tick the correct parallelograms. Includes the use of the formula: base x perpendicular height for some questions. Includes some conversions (mm to cm, cm to m and mm to m) and some decimals (halves and tenths). Children to select the base and perpendicular height from given measurements.

Questions 2, 5 and 8 (Varied Fluency)

Developing Match the parallelograms to the correct area. Differentiation as described for Question 1.

Expected Match the parallelograms to the correct area. Differentiation as described for Question 1.

Greater Depth Match the parallelograms to the correct area. Differentiation as described for Question 1.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Find the potential base and perpendicular height for a parallelogram. Differentiation as described for Question 1.

Expected Find the potential base and perpendicular heights for two parallelograms. Differentiation as described for Question 1.

Greater Depth Find the potential base and perpendicular heights for two parallelograms. Differentiation as described for Question 1.

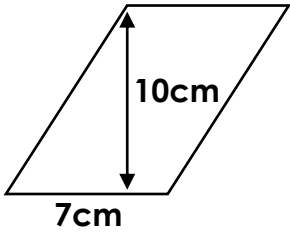
More [Year 6 Perimeter, Area and Volume](#) resources.

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

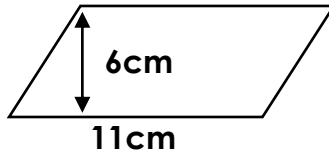
Area of a Parallelogram

1. Using the formula $a = b \times h$, tick the parallelograms below with an area between 60cm^2 and 70cm^2 .

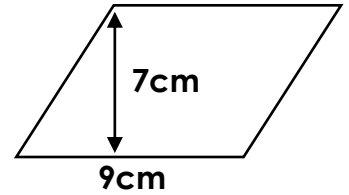
A.



B.



C.

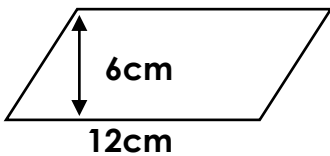


Not to scale

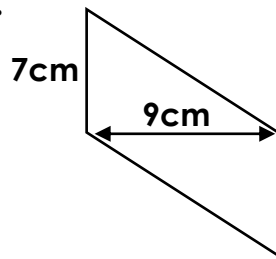
VF
HW/Ext

2. Using the correct formula, match the parallelograms to their correct areas.

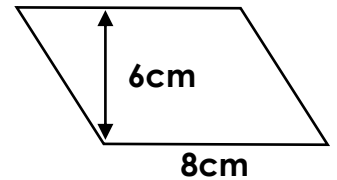
A.



B.



C.



1. 48cm^2

2. 68cm^2

3. 72cm^2

4. 63cm^2

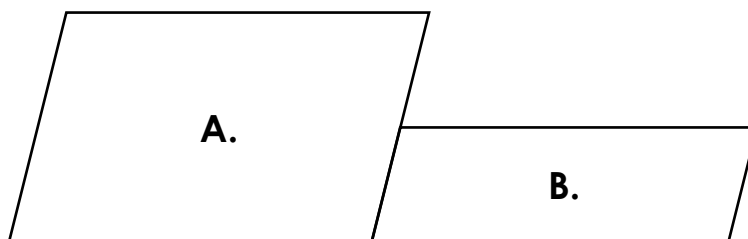
5. 49cm^2



Not to scale

VF
HW/Ext

3. The area of A is an even number; the area of B is half the area of A.



What could the base and perpendicular height be for B? Explain your answer.
Write your answers in centimetres.



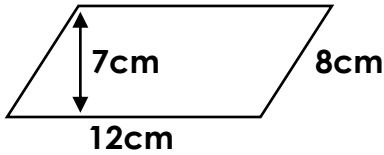
Not to scale

RPS
HW/Ext

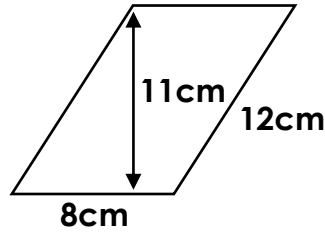
Area of a Parallelogram

4. Using the formula $a = b \times h$, tick the parallelograms below with an area between 80cm^2 and 90cm^2 .

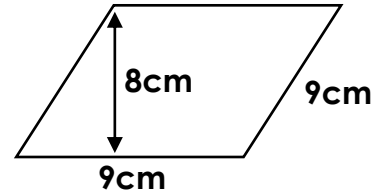
A.



B.



C.

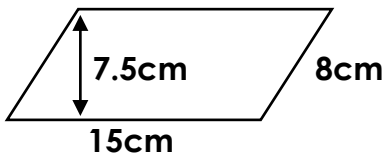


Not to scale

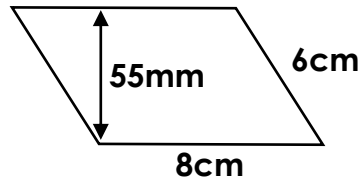
VF
HW/Ext

5. Using the correct formula, match the parallelograms to their correct areas.

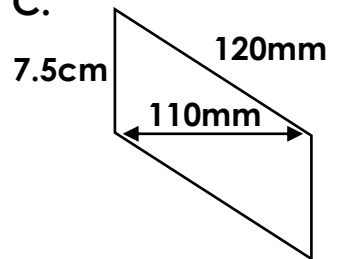
A.



B.



C.



1. 44cm^2

2. 81.5cm^2

3. 112.5cm^2

4. 82.5cm^2

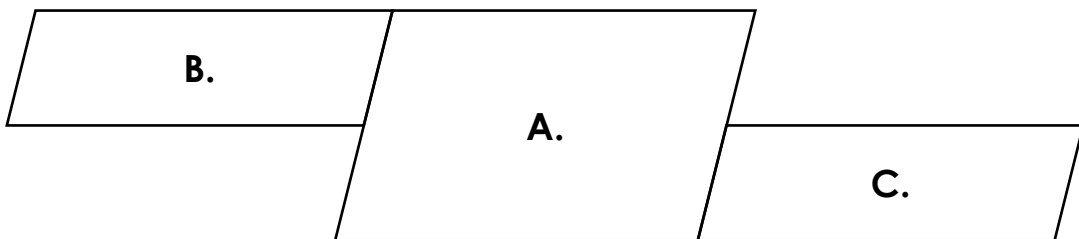
5. 45cm^2



Not to scale

VF
HW/Ext

6. The area of A is an odd number; the areas of B and C are half the area of A, but are identical to one another.



What could the base and perpendicular height be for A, B and C? Explain your answer.

Write your answers in centimetres.



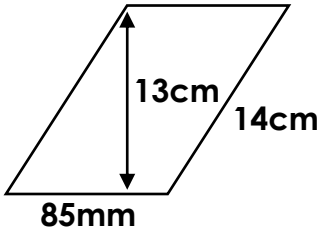
Not to scale

RPS
HW/Ext

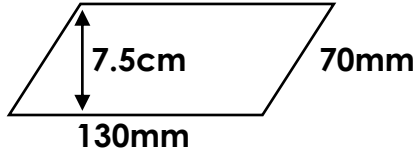
Area of a Parallelogram

7. Using the formula $a = b \times h$, tick the parallelograms below with an area between 110cm^2 and 120cm^2 .

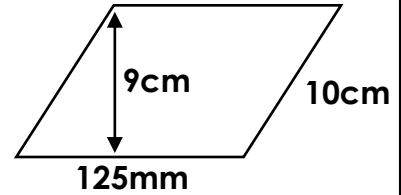
A.



B.



C.

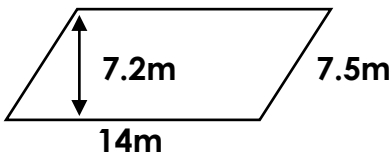


Not to scale

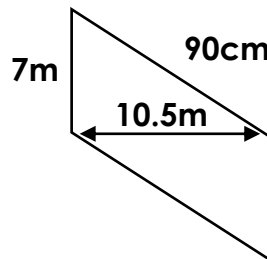
VF
HW/Ext

8. Using the correct formula, match the parallelograms to their correct areas.

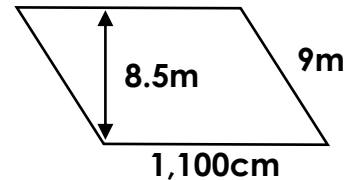
A.



B.



C.



1. 98.5m^2

2. 93.5m^2

3. 102.5m^2

4. 100.8m^2

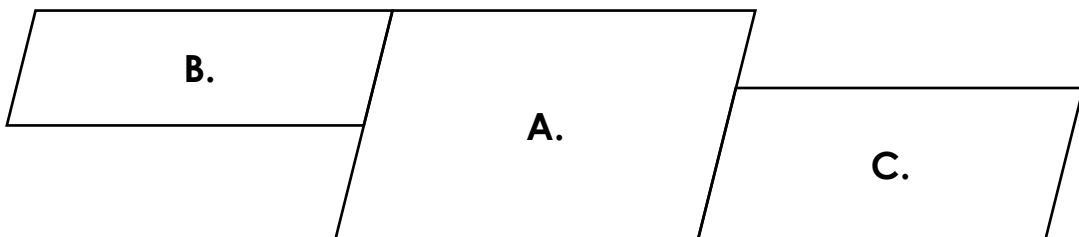
5. 73.5m^2



Not to scale

VF
HW/Ext

9. The area of A is an odd number; the area of B is half the area of A, but the area of C is two-thirds the area of A.



What could the base and perpendicular height be for A, B and C? Explain your answer.

Write your answers in centimetres.



Not to scale

RPS
HW/Ext

Homework/Extension

Area of a Parallelogram

Developing

1. B and C

2. A. 3; B. 4; C. 1

3. Various answers, for example:

A. Base = 10cm, Perpendicular height = 6cm; B. Base = 10cm, Perpendicular height = 3cm. This would be correct because the measurements of A would equal an area of 60cm^2 (which is an even number), and the measurements of B would equal an area of 30cm^2 (which is half the area of A).

Expected

4. A and B

5. A. 3; B. 1; C. 4

6. Various answers, for example:

A. Base = 11cm, Perpendicular height = 5cm; B. Base = 11cm, Perpendicular height = 2.5cm; C. Base = 11cm, Perpendicular height = 2.5cm; This would be correct because the measurements of A would equal an area of 55cm^2 (which is an odd number), and the measurements of B and C would equal an area of 27.5cm^2 (which is half the area of A and also identical to one another).

Greater Depth

7. A and C

8. A. 4; B. 5; C. 2

9. Various answers, for example:

A. Base = 31cm, Perpendicular height = 3cm; B. Base = 31cm, Perpendicular height = 1.5cm; C. Base = 31cm, Perpendicular height = 2cm; This would be correct because the measurements of A would equal an area of 93cm^2 (which is an odd number), the measurements of B would equal an area of 46.5cm^2 (which is half the area of A), and the measurements of C would equal an area of 62cm^2 (which is two-thirds the area of A).