Homework/Extension
Step 8: Angles in Quadrilaterals

National Curriculum Objectives:

Mathematics Year 6: (6G2a) Compare and classify geometric shapes based on their properties and sizes
Mathematics Year 6: (6G4a) Find unknown angles in any triangles, quadrilaterals, and regular polygons

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Check calculations of missing angles in quadrilaterals and correct any errors. Includes squares and rhombuses.
Expected Check calculations of missing angles in quadrilaterals and correct any errors. Includes squares, rhombuses, trapeziums, rectangles and parallelograms.
Greater Depth Check calculations of missing angles in quadrilaterals and correct any errors. Includes compound shapes made up of squares, rhombuses, trapeziums, rectangles and parallelograms.

Questions 2, 5 and 8 (Varied Fluency)
Developing Use knowledge of properties of shape and angles in a quadrilateral to match them to the correct statement. Includes squares and rhombuses.
Expected Use knowledge of properties of shape and angles in a quadrilateral to match them to the correct statement. Includes squares, rhombuses, trapeziums, rectangles and parallelograms.
Greater Depth Use knowledge of properties of shape and angles in a quadrilateral to match them to the correct statement. Includes compound shapes made up of squares, rhombuses, trapeziums, rectangles and parallelograms.

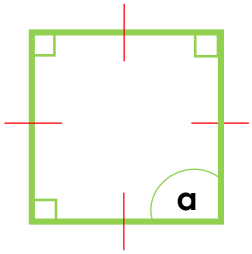
Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Identify and explain errors when describing quadrilaterals using their properties and size of angles. Includes squares and rhombuses.
Expected Identify and explain errors when describing quadrilaterals using their properties and size of angles. Includes squares, rhombuses, trapeziums, rectangles and parallelograms.
Greater Depth Identify and explain errors when describing quadrilaterals using their properties and size of angles. Includes compound shapes made up of squares, rhombuses, trapeziums, rectangles and parallelograms.

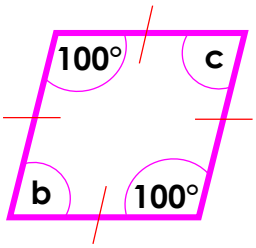
More Year 6 Properties of Shapes resources.

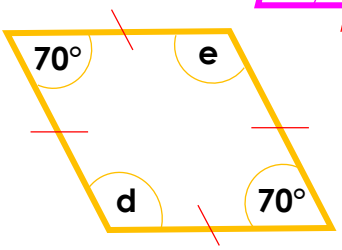
Did you like this resource? Don't forget to review it on our website.

Angles in Quadrilaterals

1. Tallen has been calculating the missing angles in the shapes below. Check his work and correct any mistakes.







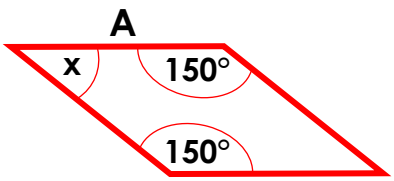
Angle	Size
a	40°
b	70°
c	80°
d	110°
e	100°

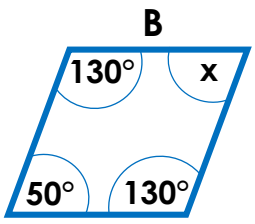
D

Quadrilaterals not drawn to scale.

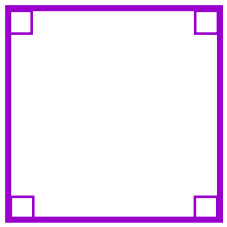
VF
HW/Ext

2. Match the shape to the correct statement.





C



Each angle measures 90°.

Angle x measures 30°.

The missing angle is half of 100°.

D

Quadrilaterals not drawn to scale.

VF
HW/Ext

3. Millie says:

I have drawn a rhombus.
My shape has 4 sides of equal length.
My shape has 2 angles that each measure 120°, and 2 angles that each measure 50°.

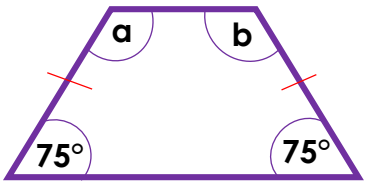
Can Millie be correct? Prove it.

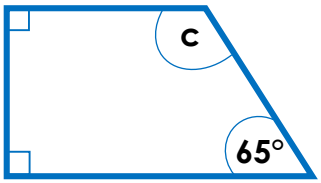
D

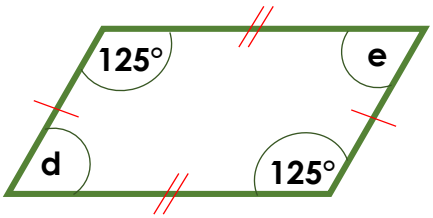
RPS
HW/Ext

Angles in Quadrilaterals

4. Maria has been calculating the missing angles in the shapes below. Check her work and correct any mistakes.





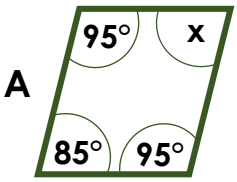


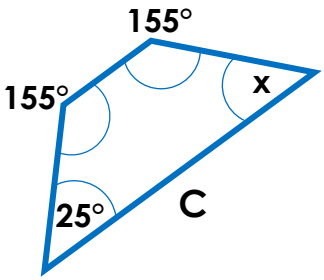
Angle	Size
a	110°
b	110°
c	115°
d	60°
e	55°

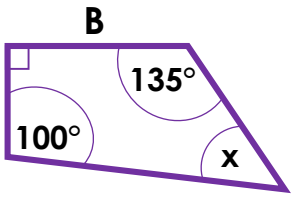
Quadrilaterals not drawn to scale.

VF
HW/Ext

5. Match the shape to the correct statement.







The missing angle is 35°.

The opposite angles are equal.

This shape has one pair of parallel sides.

Quadrilaterals not drawn to scale.

VF
HW/Ext

6. Pedro says:

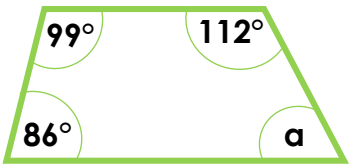
I have drawn a trapezium.
My shape has one pair of parallel sides.
My shape has 4 different sized angles of 135°, 120°, 85° and 30°.

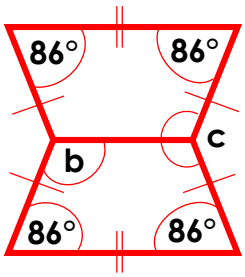
Can Pedro be correct? Prove it.

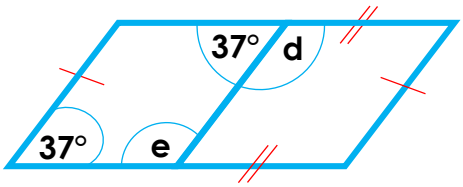
RPS
HW/Ext

Angles in Quadrilaterals

7. Moss has been calculating the missing angles in the shapes below. Check his work and correct any mistakes.







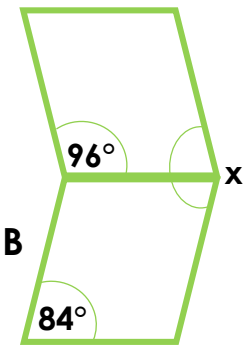
Angle	Size
a	61°
b	92°
c	184°
d	143°
e	143°

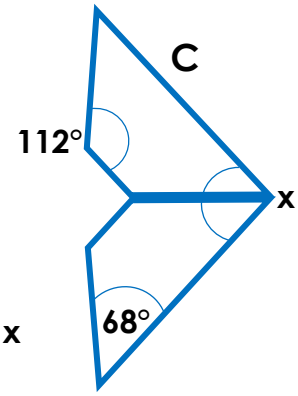
GD

Quadrilaterals not drawn to scale.

VF
HW/Ext

8. Match the shape to the correct statement.





The missing angle is 136°.

All the internal angles of this shape are different sizes.

The missing angle is 168°.

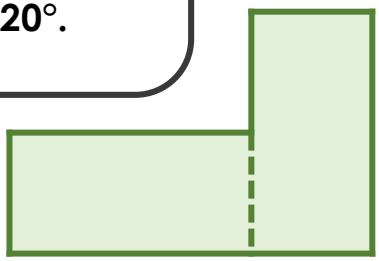
GD

Quadrilaterals not drawn to scale.

VF
HW/Ext

9. Hannah says:

I have combined two identical rectangles together. My new shape has six sides. The internal angles of my new shape now total 720°.



Can Hannah be correct? Prove it.

GD

RPS
HW/Ext

Homework/Extension
Angles in Quadrilaterals

Developing

1. Corrections include: a = 90°, b = 80°, e = 110°
2. C; A; B or A = angle x measures 30°; B = the missing angle is half of 100°; C = each angle measures 90°
3. Millie cannot be correct as her angles total 340° and not 360°.

Expected

4. Corrections include: a = 105°, b = 105°, d = 55°
5. B; A; C or A = the opposite angles are equal; B = the missing angle is 35°; C = this shape has one pair of parallel sides.
6. Pedro can not be correct as his angles total 370° and not 360°.

Greater Depth

7. Corrections include: a = 63°, b = 94°, c = 188°
8. C; A; B or A = all the angles of this shape are different sizes; B = the missing angle is 168°; C = the missing angle is 136°.
9. Hannah is correct. There are now five angles of 90° and one angle of 270°, which total 720°.