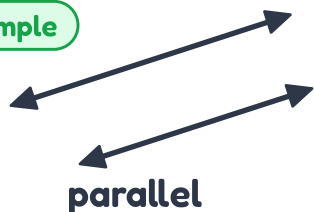


Classifying Shapes

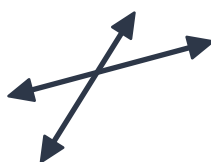
Name parallel, perpendicular, and intersecting lines.

Write parallel, perpendicular, or intersecting.

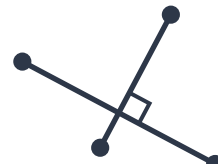
Example



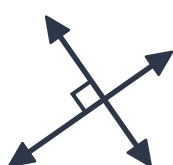
1.



2.



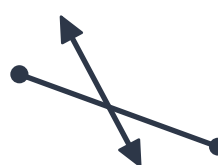
3.



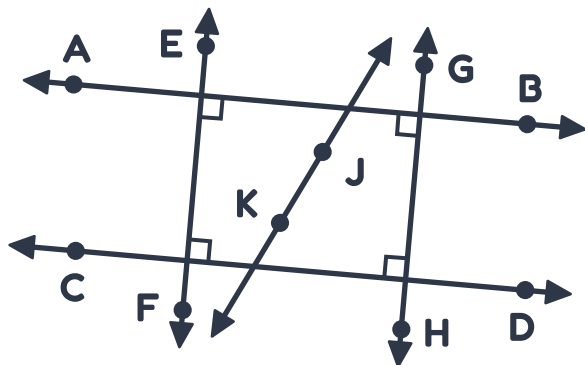
4.



5.



Use the figure. Write $\parallel$ or $\perp$ in each circle.



Example

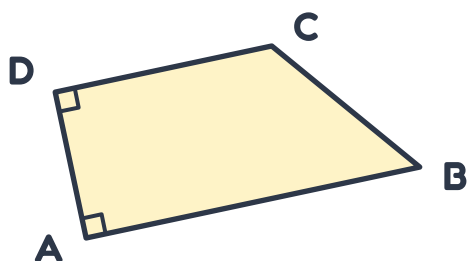
$\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$

6. $\overleftrightarrow{EF} \bigcirc \overleftrightarrow{AB}$ 7. $\overleftrightarrow{GH} \bigcirc \overleftrightarrow{EF}$

8. $\overleftrightarrow{CD} \bigcirc \overleftrightarrow{GH}$ 9. $\overleftrightarrow{AB} \bigcirc \overleftrightarrow{GH}$

10. Which line crosses $\overleftrightarrow{AB}$ but is not perpendicular to it? _____

Look at quadrilateral ABCD. Write the missing letters.



Example

$\overline{AB} \parallel \overline{CD}$

11. $\overline{AD} \perp$ _____ and $\overline{AD} \perp$ _____

12. $\angle$ _____ and $\angle$ _____ are right angles.

13. $\angle$ _____ is an obtuse angle.

Classifying Shapes

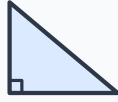
Name each triangle by its angles and by its sides.

By angles



acute

3 acute angles



right

1 right angle



obtuse

1 obtuse angle

By sides



equilateral

3 equal sides



isosceles

2 equal sides



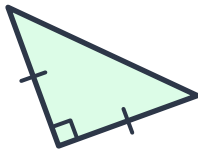
scalene

no equal sides

An acute angle is smaller than a right angle. An obtuse angle is bigger.

Write the name by angles and the name by sides.

Example



Angles: right

one angle is a right angle

Sides: isosceles

two sides are equal

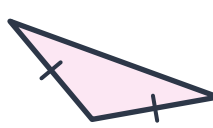
1.



Angles: _____

Sides: _____

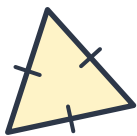
2.



Angles: _____

Sides: _____

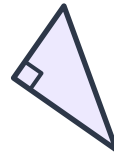
3.



Angles: _____

Sides: _____

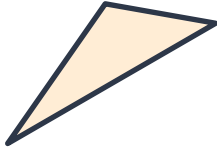
4.



Angles: _____

Sides: _____

5.



Angles: _____

Sides: _____

6.



Angles: _____

Sides: _____

Can a triangle be both? Write yes or no.

	equilateral	isosceles	scalene
acute	_____	_____	_____
right	_____	_____	Example <u>yes</u>
obtuse	_____	_____	_____

Classifying Shapes

Read the marks. Name each quadrilateral.

 equal sides

 parallel sides

 a right angle

square: 4 equal sides, 4 right angles

rectangle: 4 right angles

rhombus: 4 equal sides

quadrilateral: any shape with 4 sides

parallelogram: 2 pairs of parallel sides

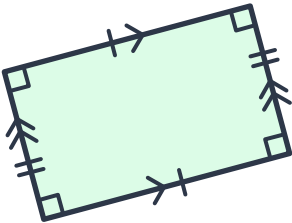
trapezoid: at least 1 pair of parallel sides

kite: 2 pairs of equal sides that touch

The best name tells the most.

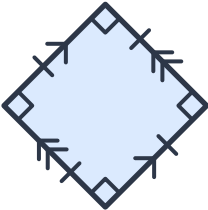
Write the best name for each shape.

Example

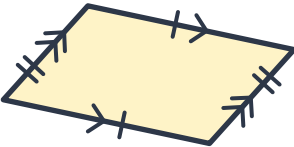


rectangle

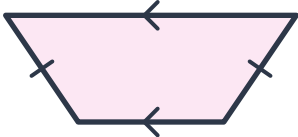
1.



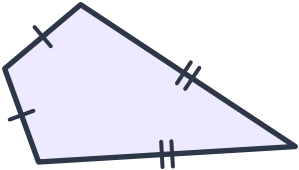
2.



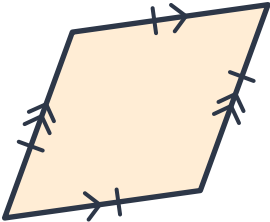
3.



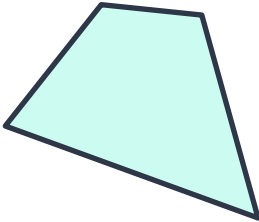
4.



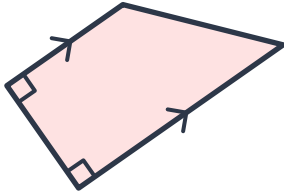
5.



6.



7.



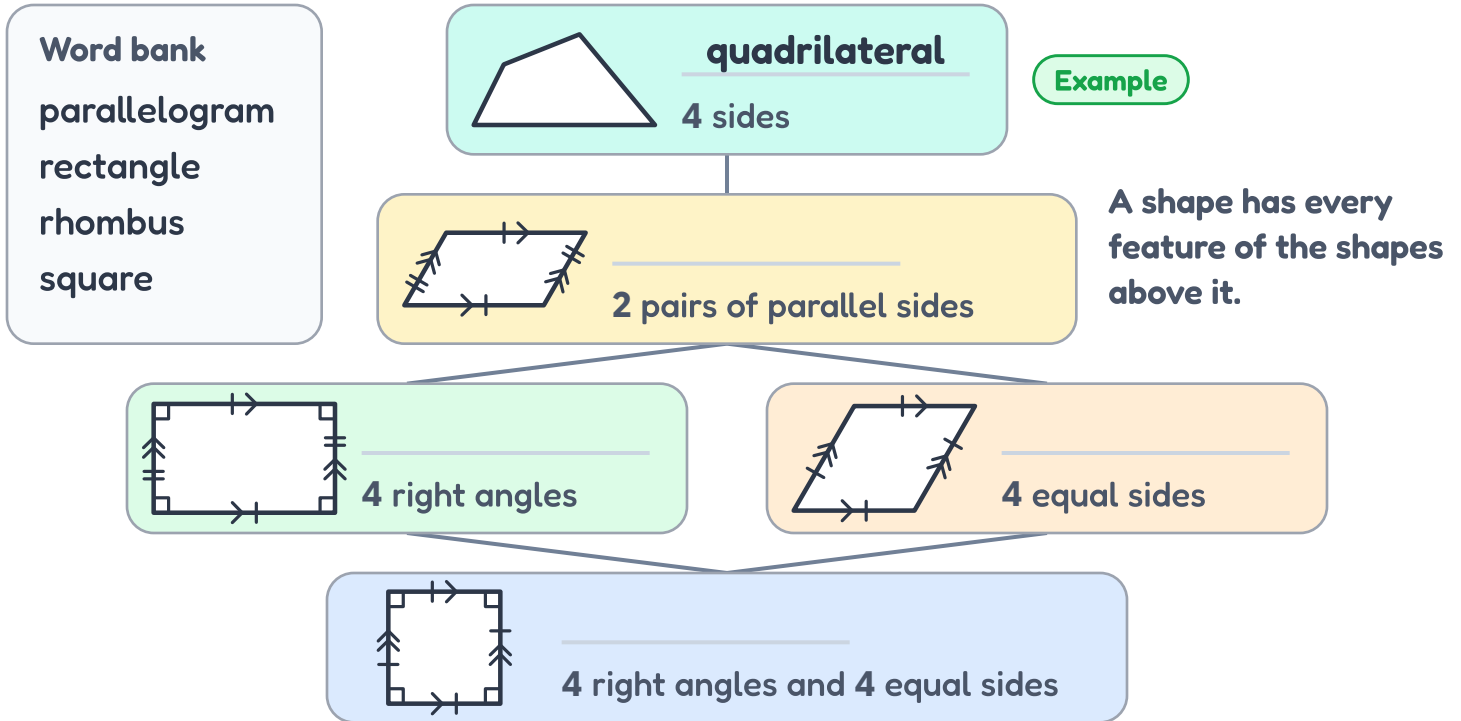
Look at the shapes above. Check every name that fits.

Shape	Quadrilateral	Parallelogram	Rectangle	Rhombus	Square
Example	✓	✓	✓		
Shape 1					
Shape 5					

Classifying Shapes

Fill in the family tree. Then circle always, sometimes, or never.

Fill in the quadrilateral family tree.



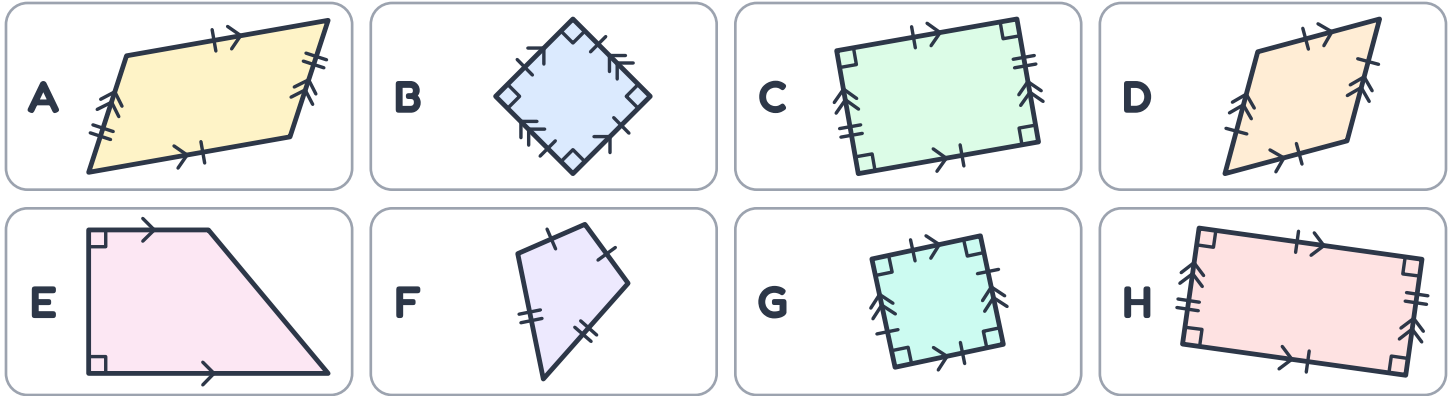
Is it always, sometimes, or never true? Circle one.

- | | |
|---|---|
| <p>Example A square is a rectangle.</p> <p><u>always</u> sometimes never</p> | <p>1. A rectangle is a square.</p> <p>always sometimes never</p> |
| <p>2. A rhombus is a parallelogram.</p> <p>always sometimes never</p> | <p>3. A rectangle has an acute angle.</p> <p>always sometimes never</p> |
| <p>4. A parallelogram is a rectangle.</p> <p>always sometimes never</p> | <p>5. A square is a rhombus.</p> <p>always sometimes never</p> |
| <p>6. A rhombus has 4 right angles.</p> <p>always sometimes never</p> | <p>7. A triangle is a quadrilateral.</p> <p>always sometimes never</p> |

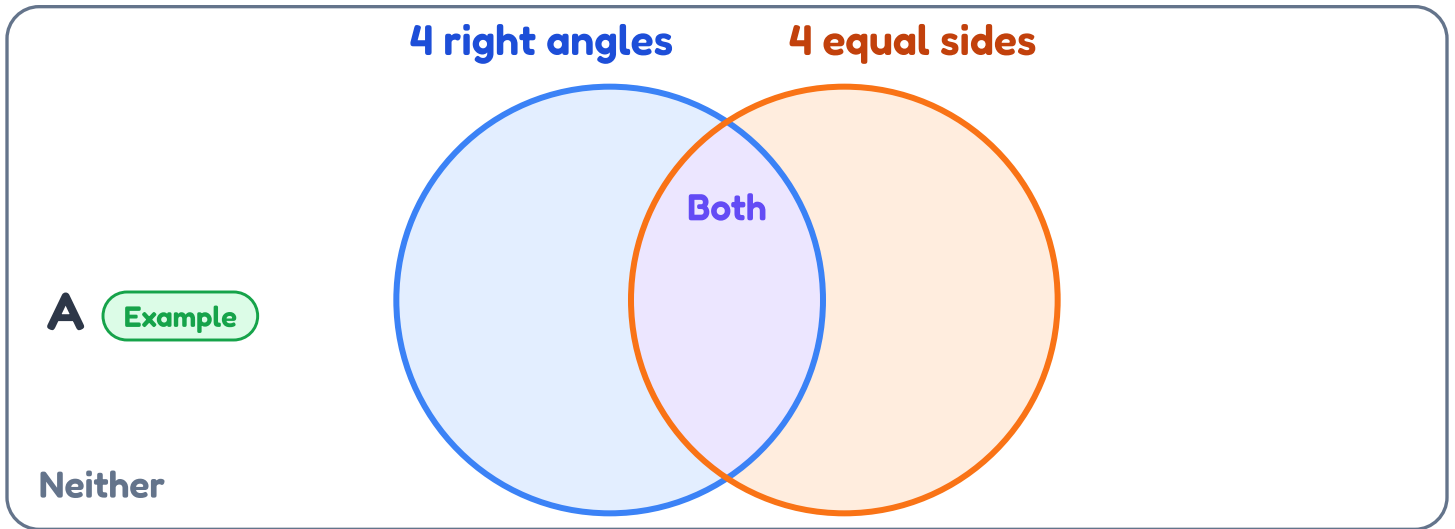
Classifying Shapes

Sort the quadrilaterals by their sides and angles.

Look at the marks on each shape.



Write the letter of each shape in the Venn diagram.



Which shapes have these? Write the letters.

Example 2 pairs of parallel sides

A, B, C, D, G, H

1. exactly 1 pair of parallel sides

2. at least 1 right angle

3. an obtuse angle

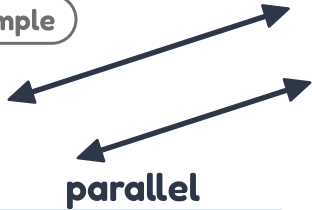
4. The best name for the shapes in both circles: _____

Classifying Shapes

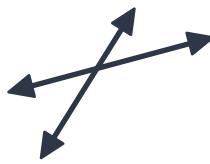
Name parallel, perpendicular, and intersecting lines.

Write parallel, perpendicular, or intersecting.

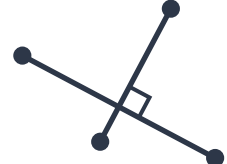
Example



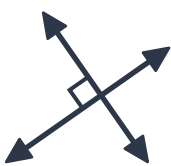
1.



2.



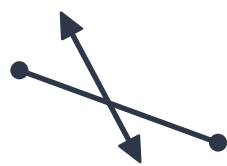
3.



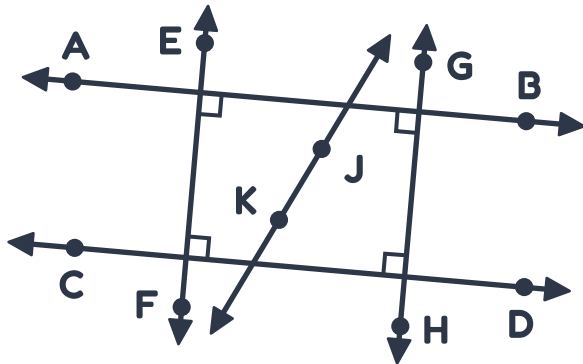
4.



5.



Use the figure. Write $\parallel$ or $\perp$ in each circle.



Example

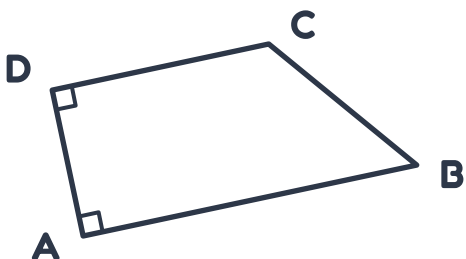


6. $\overleftrightarrow{EF}$ $\overleftrightarrow{AB}$ 7. $\overleftrightarrow{GH}$ $\overleftrightarrow{EF}$

8. $\overleftrightarrow{CD}$ $\overleftrightarrow{GH}$ 9. $\overleftrightarrow{AB}$ $\overleftrightarrow{GH}$

10. Which line crosses $\overleftrightarrow{AB}$ but is not perpendicular to it? _____

Look at quadrilateral ABCD. Write the missing letters.



Example



11. $\overline{AD} \perp$ _____ and $\overline{AD} \perp$ _____

12. $\angle$ _____ and $\angle$ _____ are right angles.

13. $\angle$ _____ is an obtuse angle.

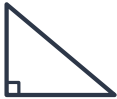
Classifying Shapes

Name each triangle by its angles and by its sides.

By angles



acute
3 acute angles



right
1 right angle



obtuse
1 obtuse angle

By sides



equilateral
3 equal sides



isosceles
2 equal sides

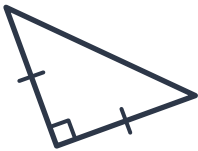


scalene
no equal sides

An acute angle is smaller than a right angle. An obtuse angle is bigger.

Write the name by angles and the name by sides.

Example



Angles: right
Sides: isosceles

one angle is a right angle
two sides are equal

1.



Angles: _____
Sides: _____

2.



Angles: _____
Sides: _____

3.



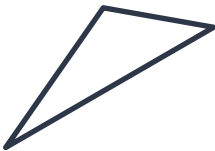
Angles: _____
Sides: _____

4.



Angles: _____
Sides: _____

5.



Angles: _____
Sides: _____

6.



Angles: _____
Sides: _____

Can a triangle be both? Write yes or no.

	equilateral	isosceles	scalene
acute	_____	_____	_____
right	_____	_____	Example <u>yes</u>
obtuse	_____	_____	_____

Classifying Shapes

Read the marks. Name each quadrilateral.

 equal sides

 parallel sides

 a right angle

square: 4 equal sides, 4 right angles

rectangle: 4 right angles

rhombus: 4 equal sides

quadrilateral: any shape with 4 sides

parallelogram: 2 pairs of parallel sides

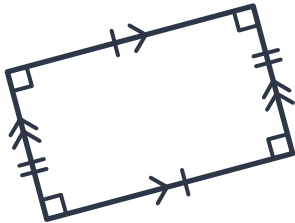
trapezoid: at least 1 pair of parallel sides

kite: 2 pairs of equal sides that touch

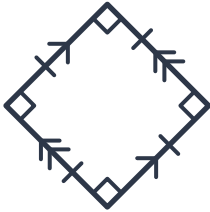
The best name tells the most.

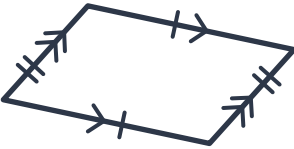
Write the best name for each shape.

Example

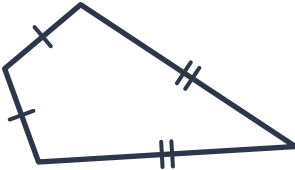


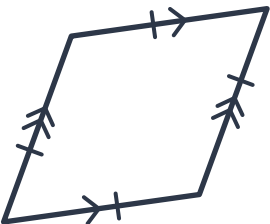
rectangle

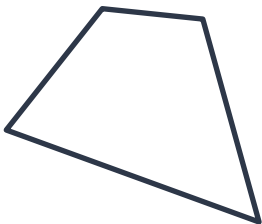
1.

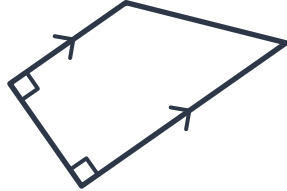
2.

3.

4.

5.

6.

7.

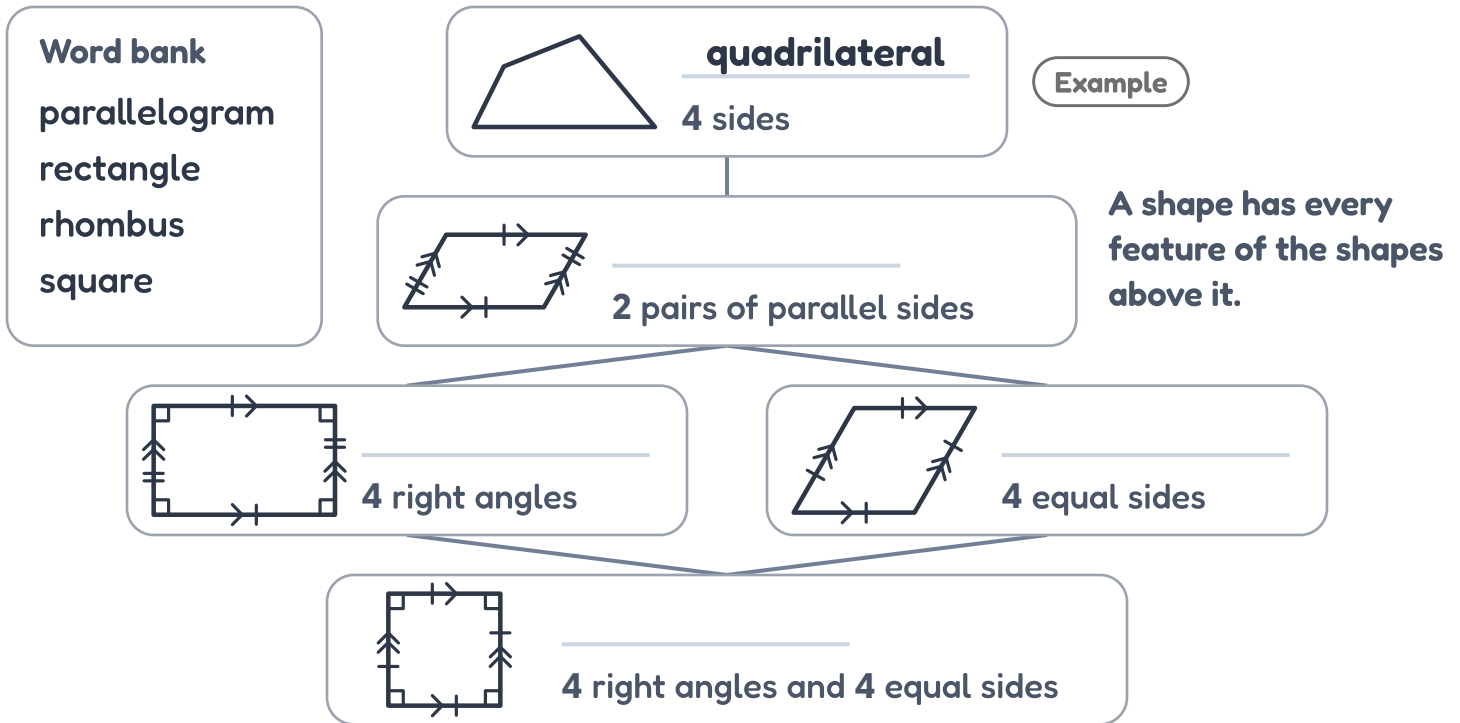
Look at the shapes above. Check every name that fits.

Shape	Quadrilateral	Parallelogram	Rectangle	Rhombus	Square
Example	✓	✓	✓		
Shape 1					
Shape 5					

Classifying Shapes

Fill in the family tree. Then circle always, sometimes, or never.

Fill in the quadrilateral family tree.



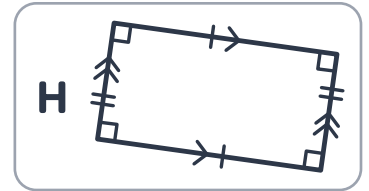
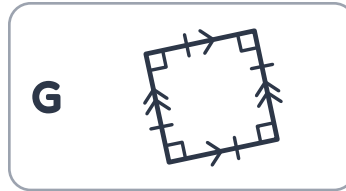
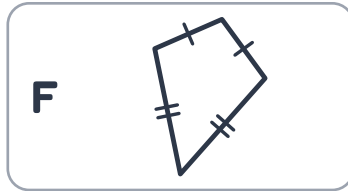
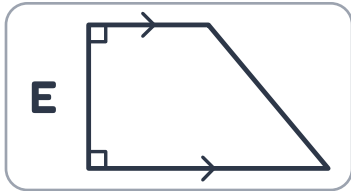
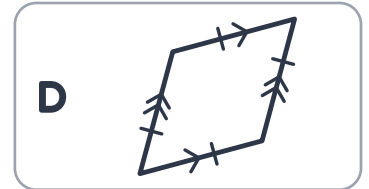
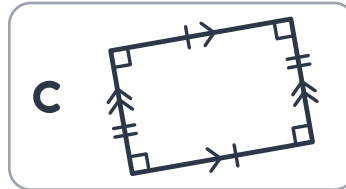
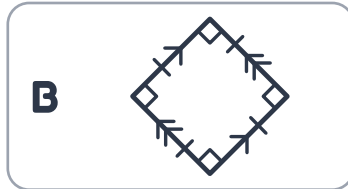
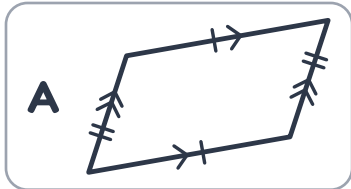
Is it always, sometimes, or never true? Circle one.

- | | |
|---|---|
| <p>Example A square is a rectangle.</p> <p><u>always</u> sometimes never</p> | <p>1. A rectangle is a square.</p> <p>always sometimes never</p> |
| <p>2. A rhombus is a parallelogram.</p> <p>always sometimes never</p> | <p>3. A rectangle has an acute angle.</p> <p>always sometimes never</p> |
| <p>4. A parallelogram is a rectangle.</p> <p>always sometimes never</p> | <p>5. A square is a rhombus.</p> <p>always sometimes never</p> |
| <p>6. A rhombus has 4 right angles.</p> <p>always sometimes never</p> | <p>7. A triangle is a quadrilateral.</p> <p>always sometimes never</p> |

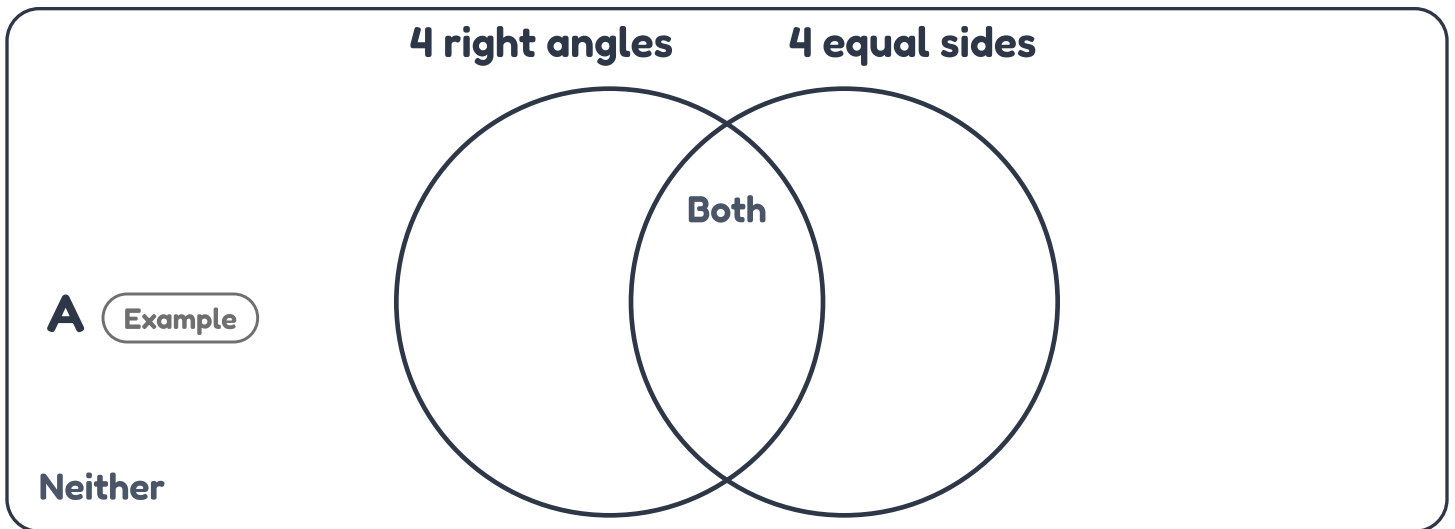
Classifying Shapes

Sort the quadrilaterals by their sides and angles.

Look at the marks on each shape.



Write the letter of each shape in the Venn diagram.



Which shapes have these? Write the letters.

Example 2 pairs of parallel sides

A, B, C, D, G, H

1. exactly 1 pair of parallel sides

2. at least 1 right angle

3. an obtuse angle

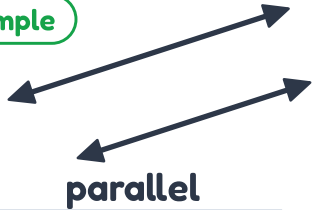
4. The best name for the shapes in both circles: _____

Classifying Shapes

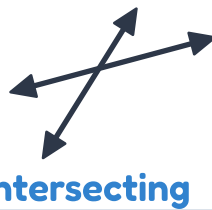
Name parallel, perpendicular, and intersecting lines.

Write parallel, perpendicular, or intersecting.

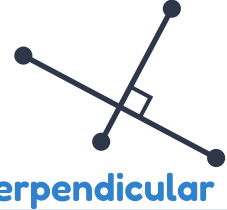
Example



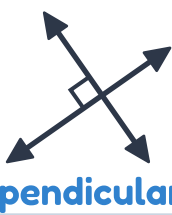
1.



2.



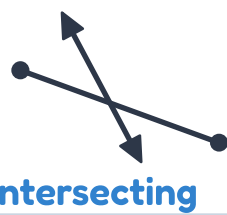
3.



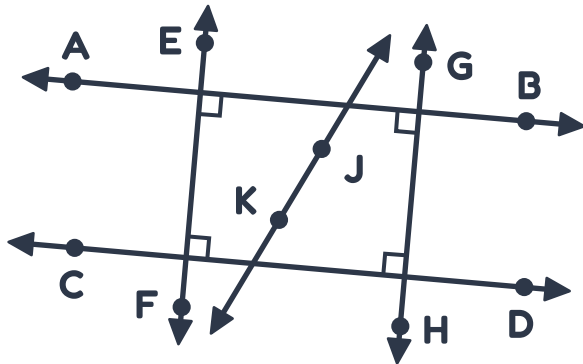
4.



5.



Use the figure. Write $\parallel$ or $\perp$ in each circle.



Example

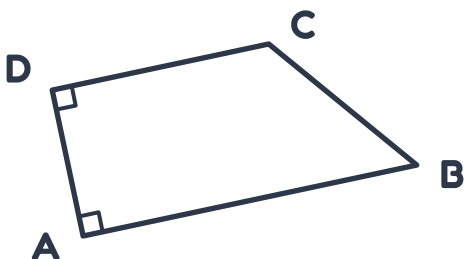


6. $\overleftrightarrow{EF} \perp \overleftrightarrow{AB}$ 7. $\overleftrightarrow{GH} \parallel \overleftrightarrow{EF}$

8. $\overleftrightarrow{CD} \perp \overleftrightarrow{GH}$ 9. $\overleftrightarrow{AB} \perp \overleftrightarrow{GH}$

10. Which line crosses $\overleftrightarrow{AB}$ but is not perpendicular to it? $\overleftrightarrow{JK}$

Look at quadrilateral ABCD. Write the missing letters.



Example

$\overline{AB} \parallel \overline{CD}$

11. $\overline{AD} \perp \overline{AB}$ and $\overline{AD} \perp \overline{CD}$

12. $\angle A$ and $\angle D$ are right angles.

13. $\angle C$ is an obtuse angle.

Classifying Shapes

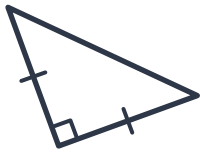
Name each triangle by its angles and by its sides.

By angles		acute 3 acute angles		right 1 right angle		obtuse 1 obtuse angle
By sides		equilateral 3 equal sides		isosceles 2 equal sides		scalene no equal sides

An acute angle is smaller than a right angle. An obtuse angle is bigger.

Write the name by angles and the name by sides.

Example



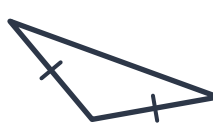
Angles: right one angle is a right angle
Sides: isosceles two sides are equal

1.



Angles: acute
Sides: scalene

2.



Angles: obtuse
Sides: isosceles

3.



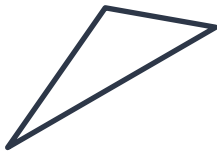
Angles: acute
Sides: equilateral

4.



Angles: right
Sides: scalene

5.



Angles: obtuse
Sides: scalene

6.



Angles: acute
Sides: isosceles

Can a triangle be both? Write yes or no.

	equilateral	isosceles	scalene
acute	<u>yes</u>	<u>yes</u>	<u>yes</u>
right	<u>no</u>	<u>yes</u>	Example <u>yes</u>
obtuse	<u>no</u>	<u>yes</u>	<u>yes</u>

Classifying Shapes

Read the marks. Name each quadrilateral.



equal sides



parallel sides



a right angle

square: 4 equal sides, 4 right angles

rectangle: 4 right angles

rhombus: 4 equal sides

quadrilateral: any shape with 4 sides

parallelogram: 2 pairs of parallel sides

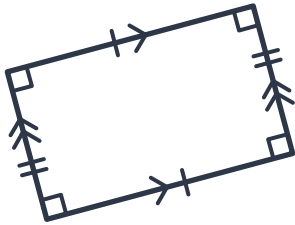
trapezoid: at least 1 pair of parallel sides

kite: 2 pairs of equal sides that touch

The best name tells the most.

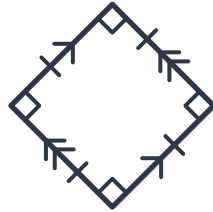
Write the best name for each shape.

Example



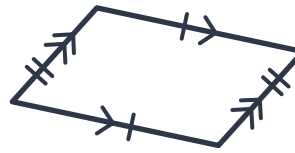
rectangle

1.



square

2.



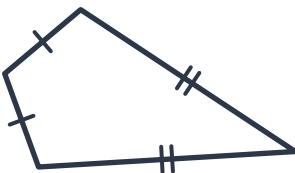
parallelogram

3.



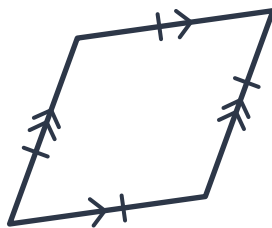
trapezoid

4.



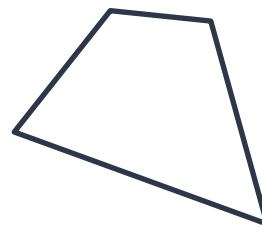
kite

5.



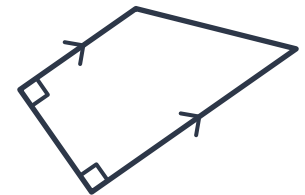
rhombus

6.



quadrilateral

7.



trapezoid

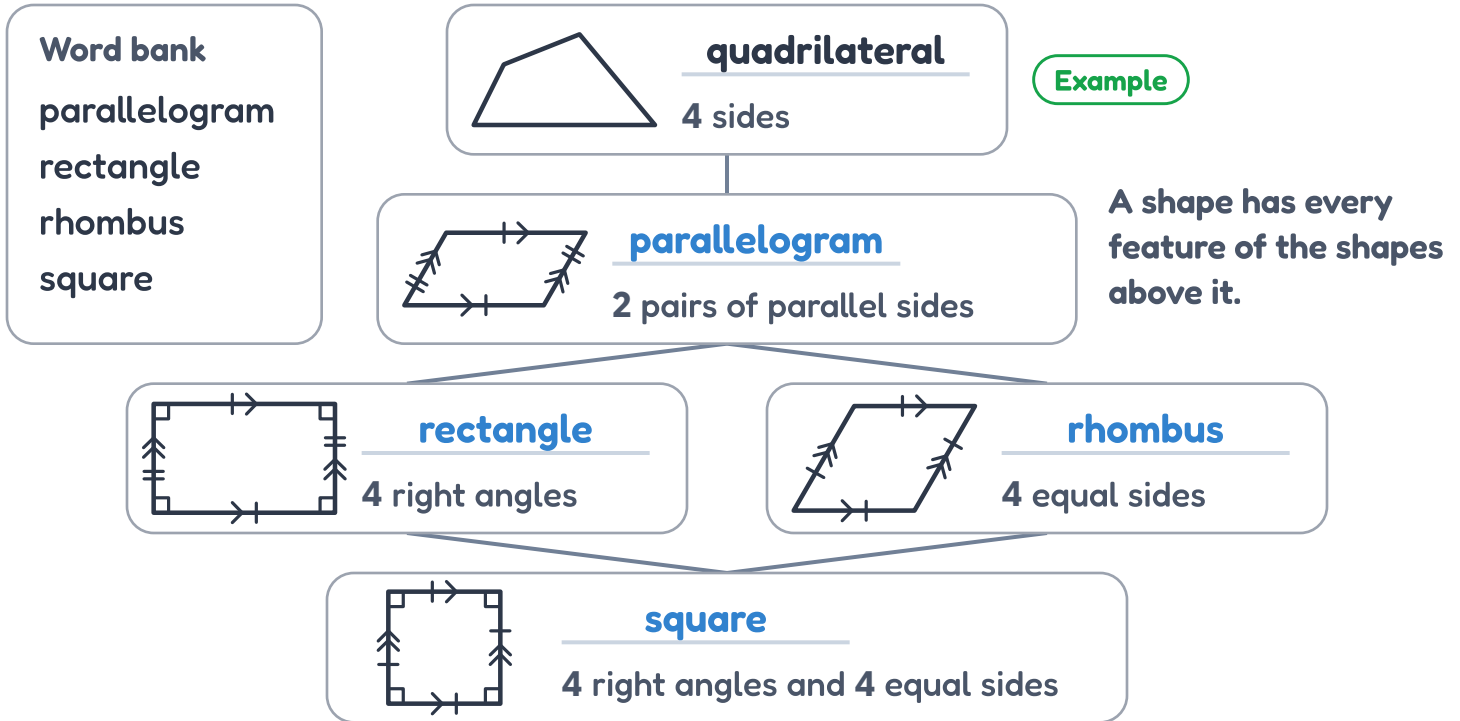
Look at the shapes above. Check every name that fits.

Shape	Quadrilateral	Parallelogram	Rectangle	Rhombus	Square
Example	✓	✓	✓		
Shape 1	✓	✓	✓	✓	✓
Shape 5	✓	✓		✓	

Classifying Shapes

Fill in the family tree. Then circle always, sometimes, or never.

Fill in the quadrilateral family tree.



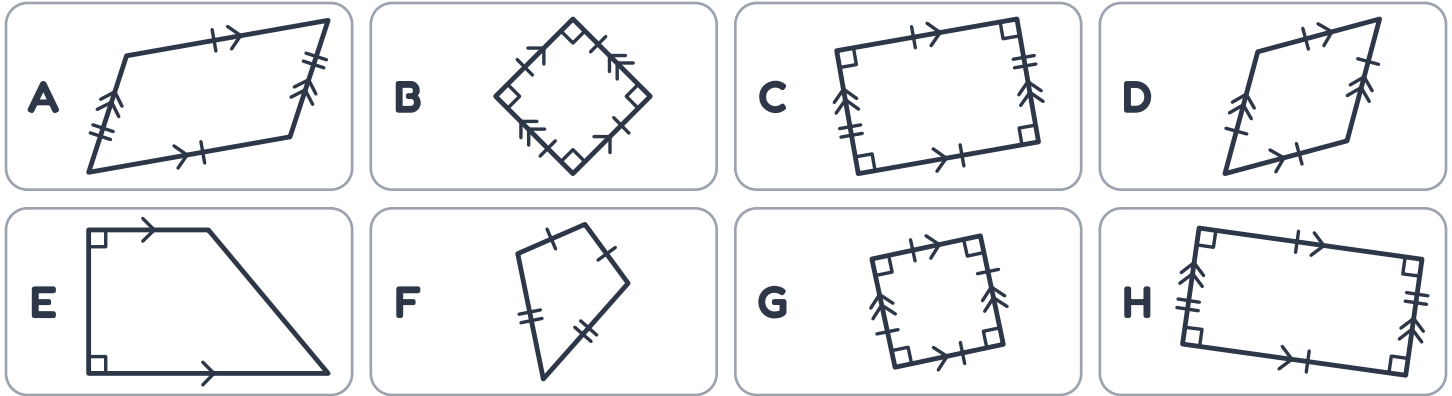
Is it always, sometimes, or never true? Circle one.

- | | |
|---|--|
| <p>Example A square is a rectangle.</p> <p><u>always</u> sometimes never</p> | <p>1. A rectangle is a square.</p> <p>always <u>sometimes</u> never</p> |
| <p>2. A rhombus is a parallelogram.</p> <p><u>always</u> sometimes never</p> | <p>3. A rectangle has an acute angle.</p> <p>always sometimes <u>never</u></p> |
| <p>4. A parallelogram is a rectangle.</p> <p>always <u>sometimes</u> never</p> | <p>5. A square is a rhombus.</p> <p><u>always</u> sometimes never</p> |
| <p>6. A rhombus has 4 right angles.</p> <p>always <u>sometimes</u> never</p> | <p>7. A triangle is a quadrilateral.</p> <p>always sometimes <u>never</u></p> |

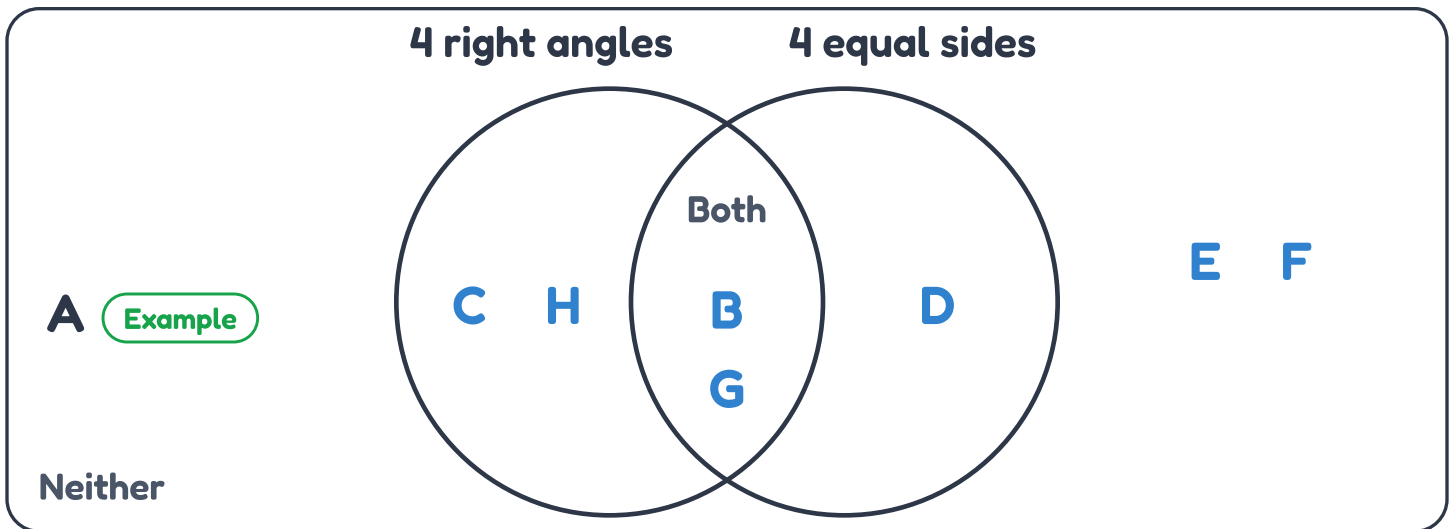
Classifying Shapes

Sort the quadrilaterals by their sides and angles.

Look at the marks on each shape.



Write the letter of each shape in the Venn diagram.



Which shapes have these? Write the letters.

Example 2 pairs of parallel sides

- exactly 1 pair of parallel sides
- at least 1 right angle
- an obtuse angle

A, B, C, D, G, H

E

B, C, E, G, H

A, D, E, F

4. The best name for the shapes in both circles: square