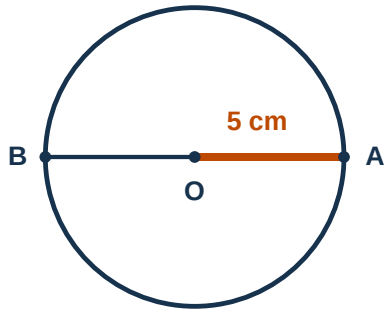
Look. Think. Explain.

Five short challenges to try together. Use a pencil, plain paper and a ruler. Choose a starting point that fits your learner; answers are on page 3.

01 Across the circle

START HERE / Radius and diameter



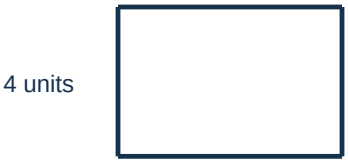
O is the center. A and B lie on the circle, and AB passes through O.

What is OA called? _____
What is AB called? _____
How long is AB? _____

Why does AB contain two equal radii?

02 Same space, different fence?

TRY NEXT / Area and perimeter





Find the area and perimeter of each rectangle.
Left: area _____ perimeter _____
Right: area _____ perimeter _____

Do equal areas always mean equal perimeters? Explain.

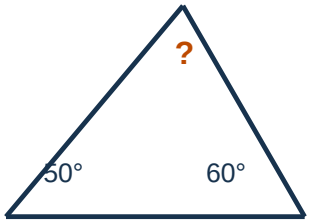
Try it: draw another rectangle with area 24 square units. Does it need the same length of fence?

Try a new point of view.

Predict first, then draw or fold to check. A good explanation matters as much as the answer. Diagrams show the stated relationships; use the given measurements.

03 Find the missing angle

TRY NEXT / Interior angles of a triangle

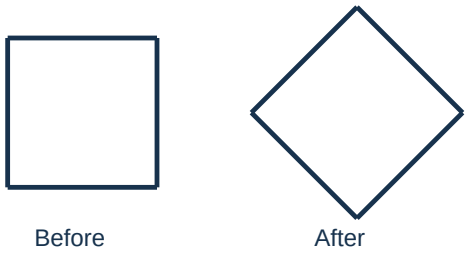


Two interior angles are 50° and 60°.
The third angle is _____.

Check with paper: cut out a triangle and tear off its three corners. Place the corners side by side with their vertices together to make a straight angle.

04 A square on the move

START HERE / Properties stay the same



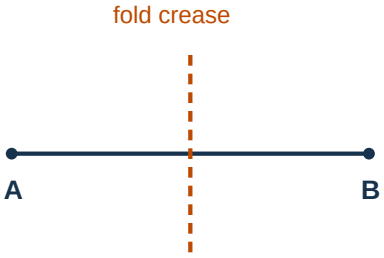
Draw a square, then turn the paper.

Is it still a square? _____
Which two properties can you check to explain your answer?

The properties I checked:

05 Find the middle with a fold

STRETCH / Midpoint and perpendicular bisector



Mark A and B well inside a sheet of paper. Join them with a straight segment. Fold so A lands exactly on B, then unfold.

Where does the crease cross AB?
What angle does it make with AB?
Why are the two parts equal?

Answers & conversation starters.

For a parent, teacher or learning partner. Invite an explanation before revealing an answer. The activities are free to use without downloading the app.

01 / Across the circle

OA is a radius. AB is a diameter. AB = 10 cm because it consists of two radii, each 5 cm long. A diameter must pass through the center.

Ask: If the diameter were 12 cm, how long would a radius be? (6 cm.)

02 / Same space, different fence?

The 6 by 4 rectangle has area 24 square units and perimeter 20 units. The 8 by 3 rectangle has area 24 square units and perimeter 22 units. Equal areas do not guarantee equal perimeters.

Another example: a 12 by 2 rectangle has area 24 square units and perimeter 28 units.

03 / Find the missing angle

The missing angle is 70°. The interior angles of a triangle add to 180°: 180 - 50 - 60 = 70. The three paper corners fit together to form a straight angle.

Ask: Would rotating the triangle change its angle sum? Why?

04 / A square on the move

Yes, it is still a square. It still has four equal sides and four right angles. Turning the whole figure changes its orientation, not these properties.

Ask: Why is the way a shape is tilted not enough to name it?

05 / Find the middle with a fold

The crease crosses AB at its midpoint and at a right angle (90°). It is the perpendicular bisector of AB. Folding A onto B matches the two halves of the segment.

Extension: every point on this crease is equally far from A and B.

Keep the conversation going.

Find short geometry videos and more paper activities on **GeoGlow: Learn Geometry** on Facebook.
Scan the code or open the activities page below.

geoglow.appsorder.com/activities