

### Properties of Shapes part 3

Whether you are a parent, teacher or home school educator, we've compiled examples of activities, games and puzzles which can be used to support the learning of shape and space.

These examples are taken from the 'Properties of Shapes' packs found in our SMILE resource collection. The mathematical demand increases as you work through the packs. There are lots more ideas in the complete packs, which can be downloaded at <https://www.stem.org.uk/rxzfd>

Answers to cards can be found at <https://www.stem.org.uk/rxxo5>

Smile 1698

# Identikit

You might find it helpful to work with a partner.

1

Describe a circle without using the words *circle* or *round*.  
When you are satisfied with your description, write it down.

2

Choose at least 3 other items from the list below. Write out a description for each item on a separate piece of paper.

(a) cube	(b) square
(c) sphere	(d) parallel
(e) tessellation	

3

Give your descriptions to someone else.  
Can she identify what you have described?

Smile 1744

YES

NO

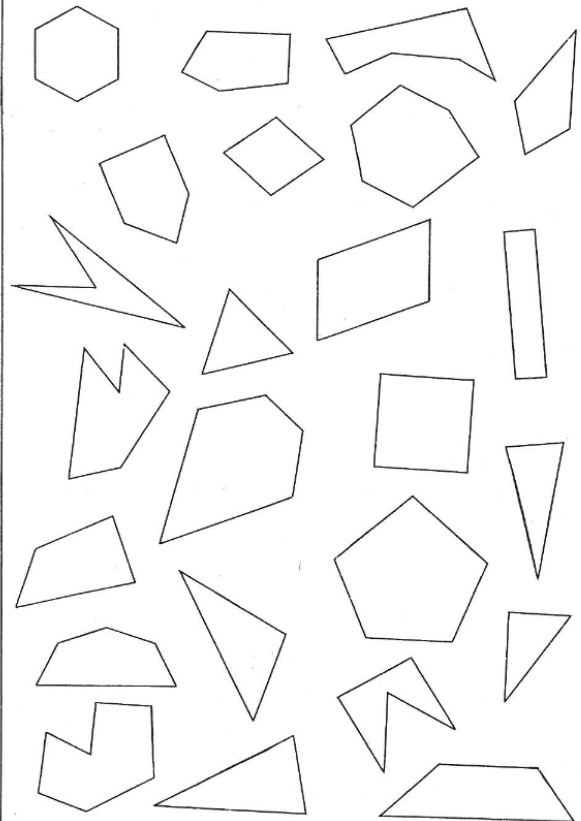
A • GAME • FOR • 2 • OR • MORE • PLAYERS

**T**his card contains three separate boards. Decide which board to use.

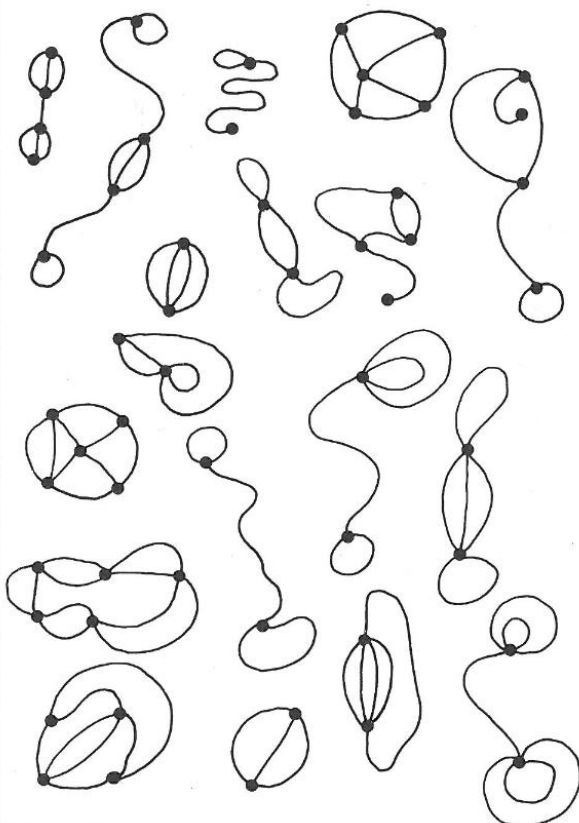
**O**ne player secretly chooses one of the diagrams on that board. The other players must then try to work out which diagram was chosen by asking questions.

**P**layers may only ask questions which can be answered YES or NO. Questions like "Is this the right one?" are *not allowed*. Try to ask as few questions as possible.

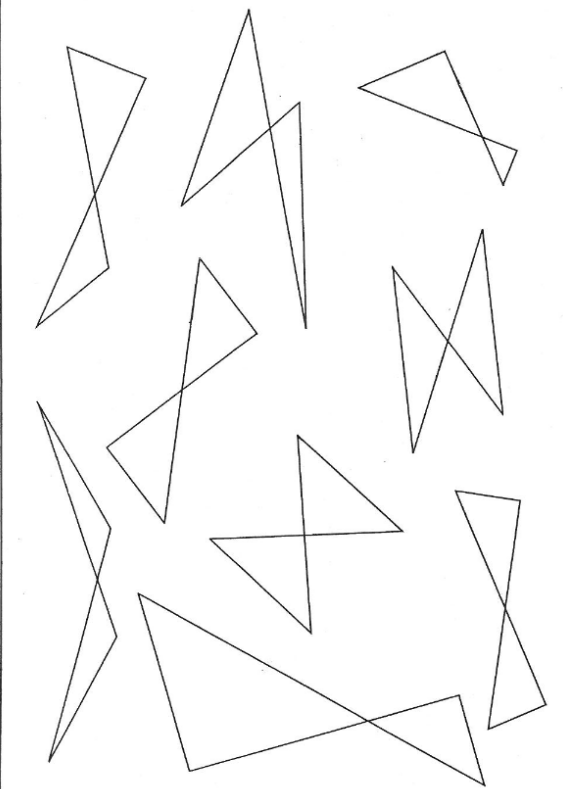
Game 1



Game 2



Game 3



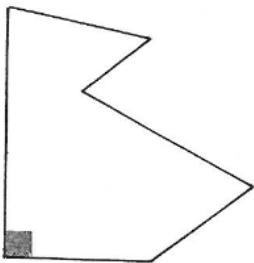
Smile 1843

# Polygons and Right Angles

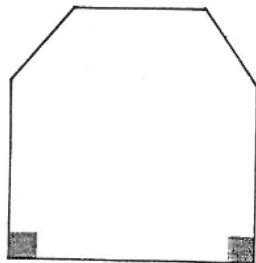
Investigate  
**how many**  
right-angles  
**other**  
polygons  
**can have.**

A hexagon has 6 sides.

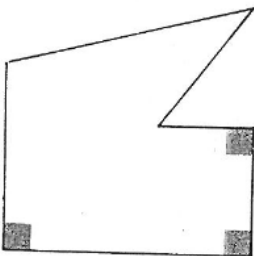
It can have ...



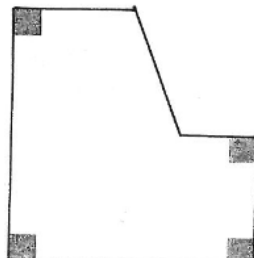
1 right angle ...



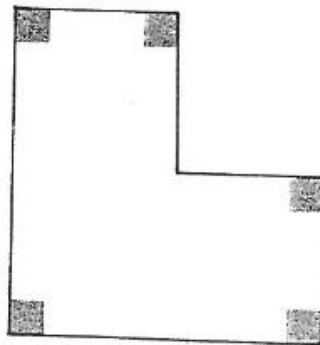
or 2 right angles ...



or 3 right angles ...



or 4 right angles ...



or 5 right angles ...

A hexagon  
cannot have  
6 right angles  
**Why?**

# Identical halves

Show how each one can be cut into two identical pieces.

