# Geometric Constructions

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# Information

## Common core icons

This icon indicates a slide where the Standards for Mathematical Practice are being developed. Details of these are given in the Notes field.

Slides containing examples of mathematical modeling are marked with this stamp.

This icon indicates an opportunity for discussion or group work.

The **Standards for Mathematical Practice** outlined in the Common Core State Standards for Mathematics describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

These are:

**1) Make sense of problems and persevere in solving them.**

**2) Reason abstractly and quantitatively.**

**3) Construct viable arguments and critique the reasoning of others.**

**4) Model with mathematics.**

**5) Use appropriate tools strategically.**

**6) Attend to precision.**

**7) Look for and make use of structure.**

**8) Look for and express regularity in repeated reasoning.**

This icon indicates that the slide contains activities created in Flash. These activities are not editable.

This icon indicates teacher's notes in the Notes field.



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# Lines and rays

I can draw a line that is 3 inches long.

**What is wrong with Alex's statement?**



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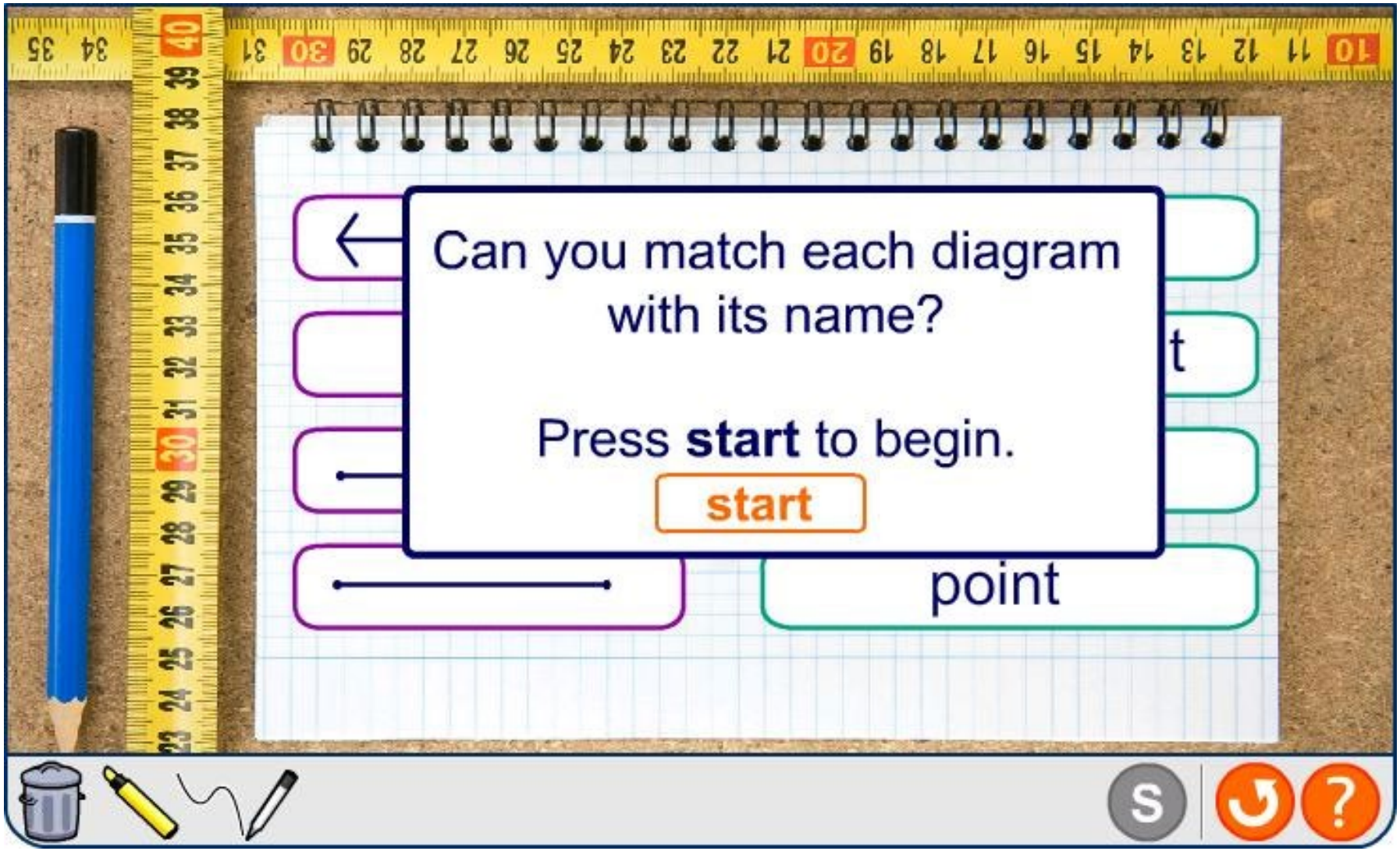
# Matching





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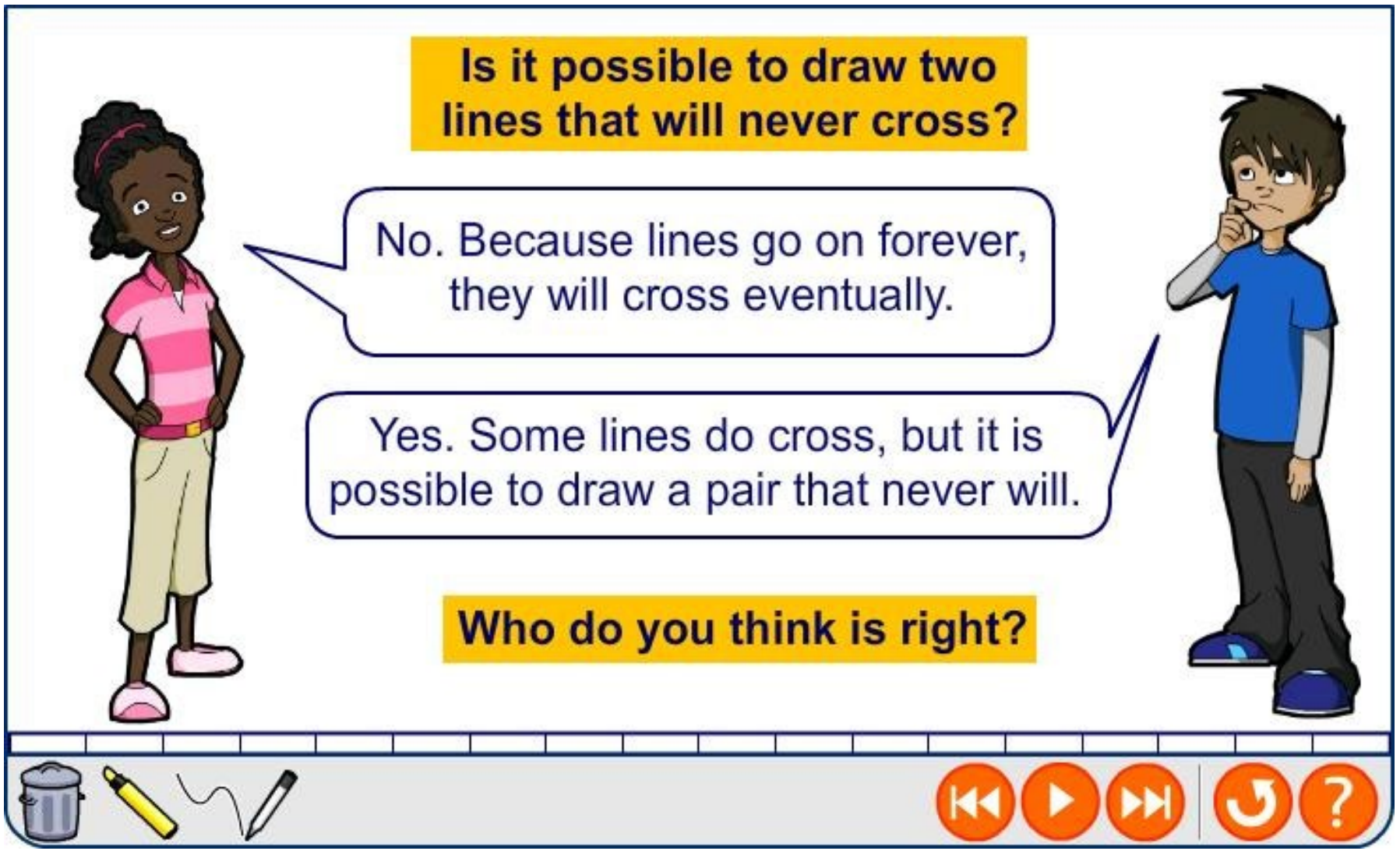
# Angles and parallel lines





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# Measuring angles

Drag the blue circle to create an angle.
Use the protractor tool to measure your angle, then press the blue box to check your answer.

Press **start** to begin.

start

36
12
8
4
0

angle:

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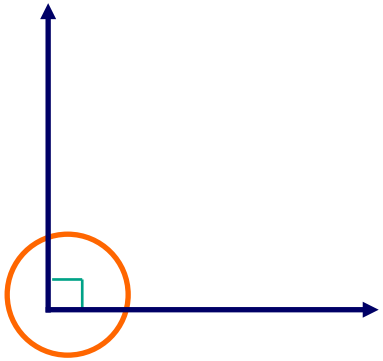
# Right angles

Did you notice that the angle halfway to a straight line measures 90°? This angle is called a **right angle**.



Right angles are often marked with a square to show that they are exactly 90°.

**How many right angles can you see in your classroom?**



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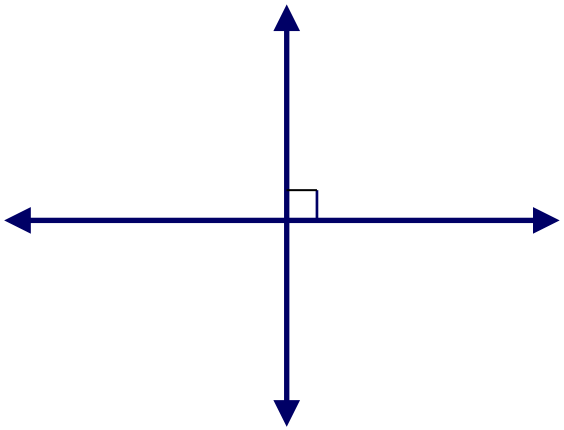
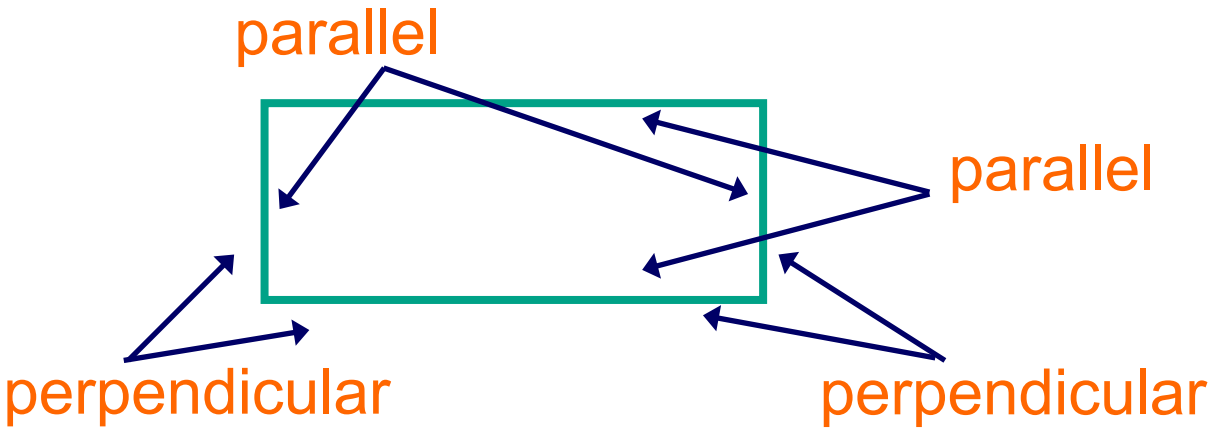
# Perpendicular lines

Lines that intersect at a 90° are called **perpendicular lines**.






**Which sides of this shape are parallel to each other? Which are perpendicular?**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# Sides of shapes

Select two of the line segments in each shape.
Decide whether the lines are parallel or perpendicular,
and then press the correct button.

parallel | perpendicular


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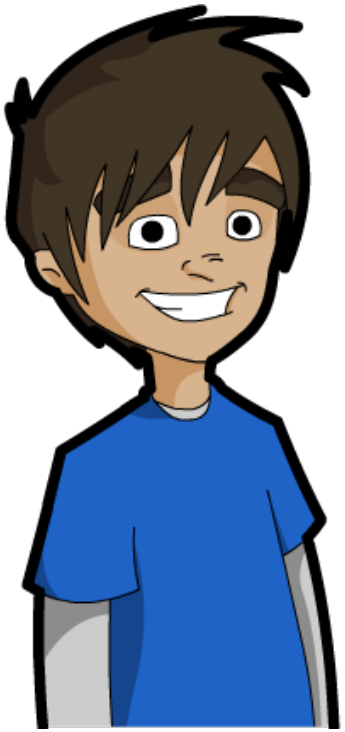
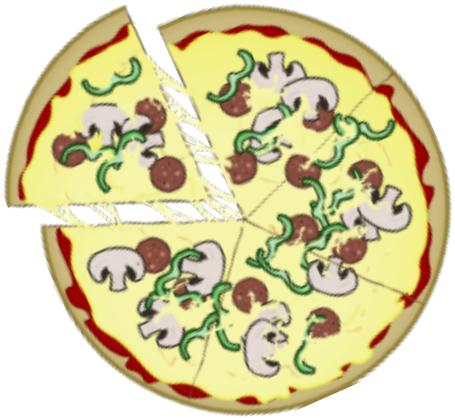
# Acute and obtuse angles

Angles that are **smaller than 90°** are called **acute angles**.

Angles that are **larger than 90°** are called **obtuse angles**.



**Which of these pizza slices is acute?**
**Which is obtuse?**



**acute**

**obtuse**



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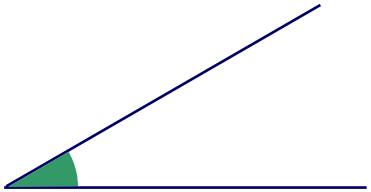
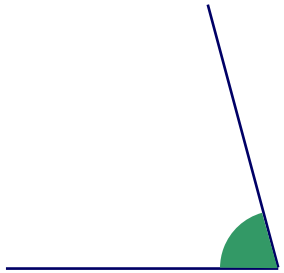
# Acute or obtuse?

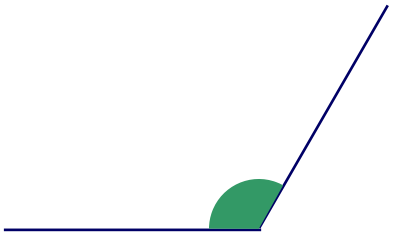
Are these angles **acute** or **obtuse**?



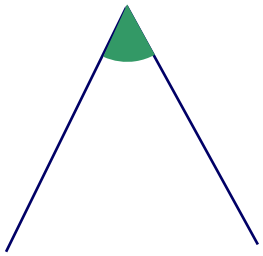
acute 30°



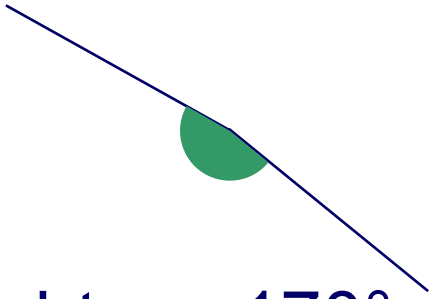
acute 75°



obtuse 120°



acute 55°



obtuse 170°

obtuse 135°



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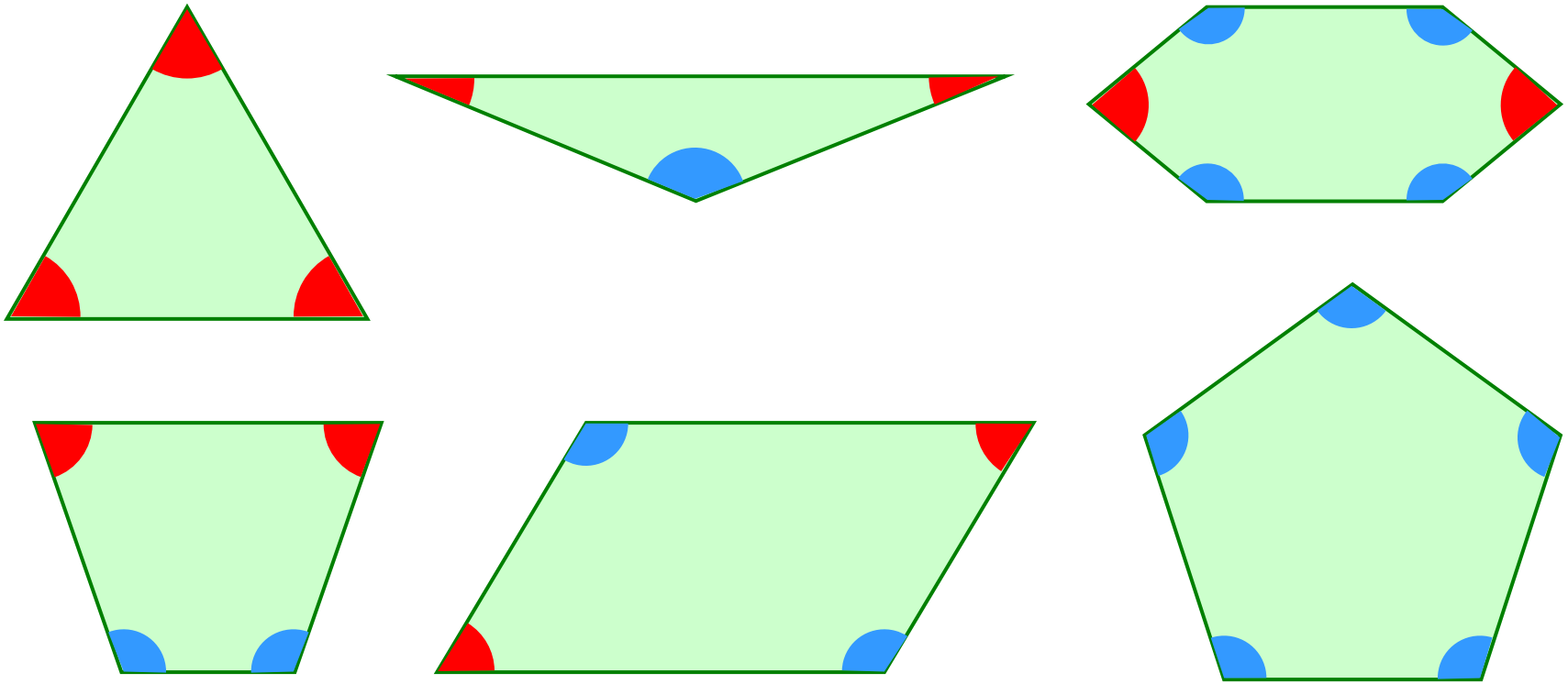
# Acute or obtuse?

Can you find all the acute angles and all the obtuse angles in these shapes?

Acute angles

Obtuse angles





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# Classifying shapes

How could we divide these triangles into groups?

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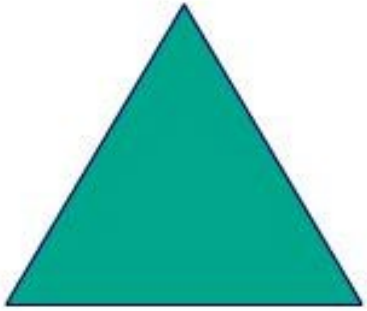
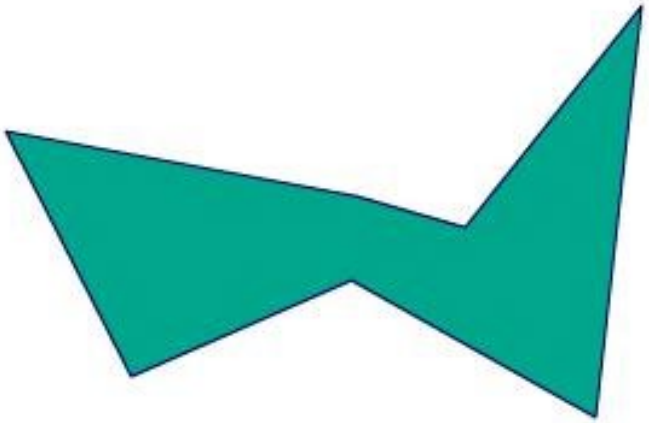
# Lines of symmetry

What is different about these two shapes?







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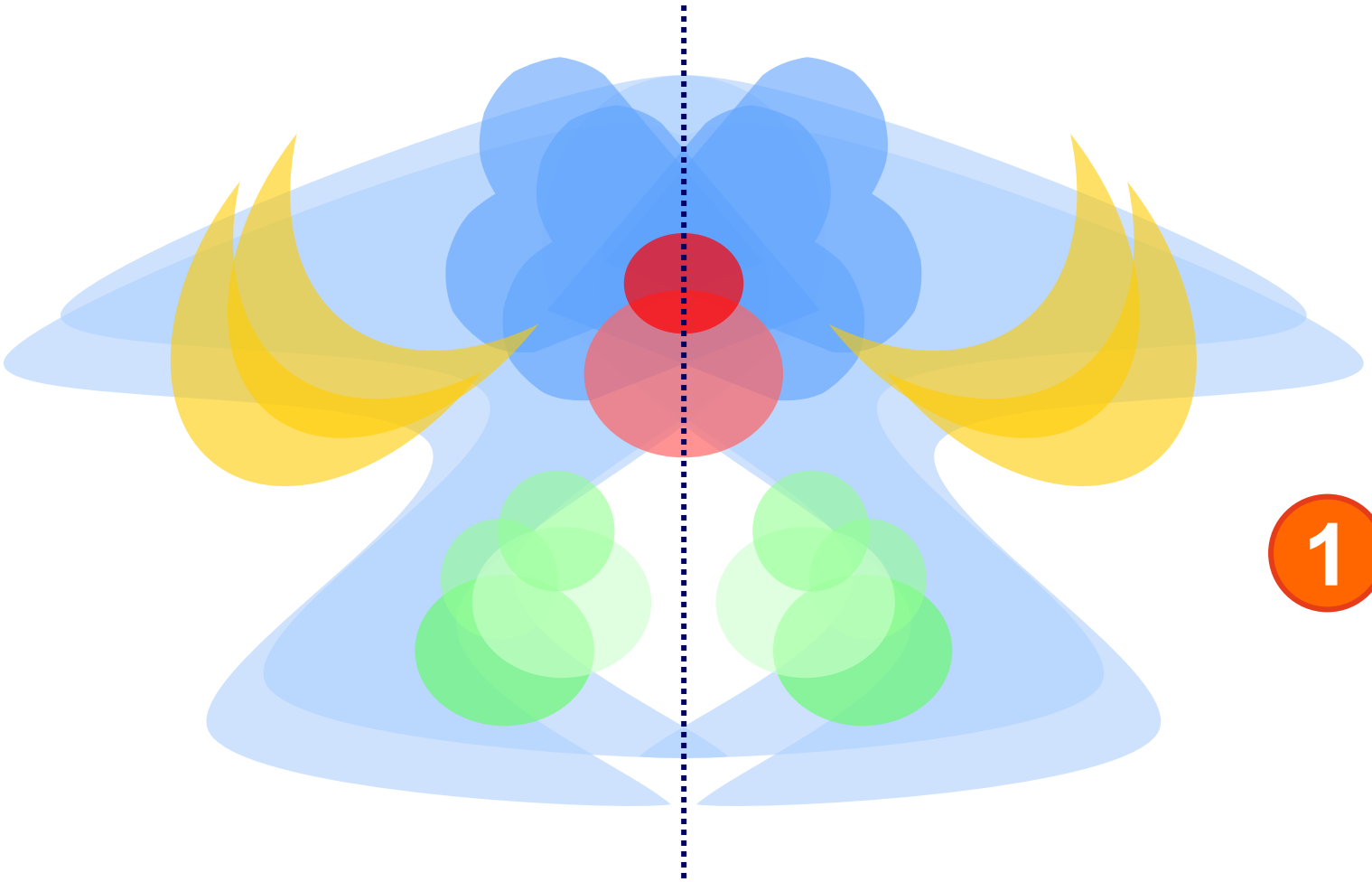
# How many lines of symmetry?



1



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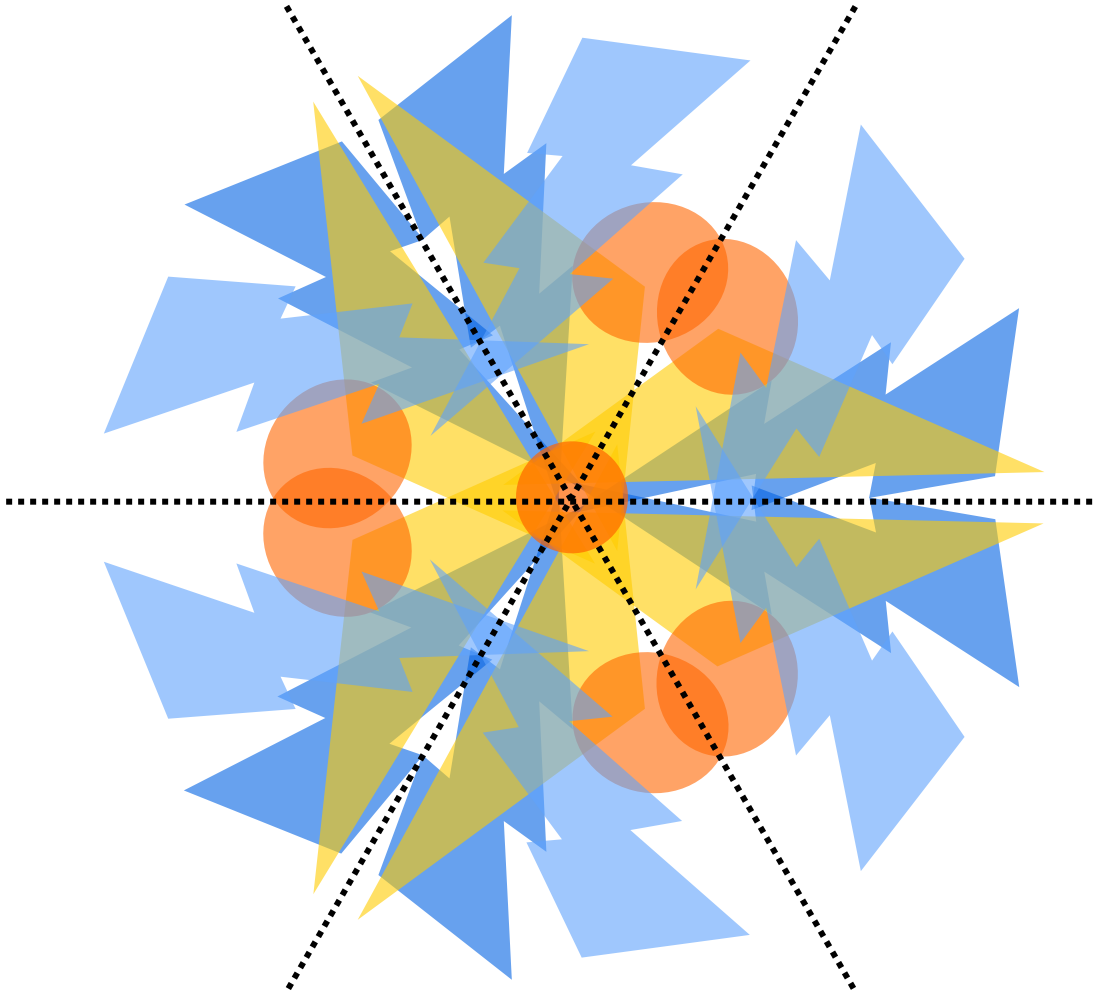
# How many lines of symmetry?



3



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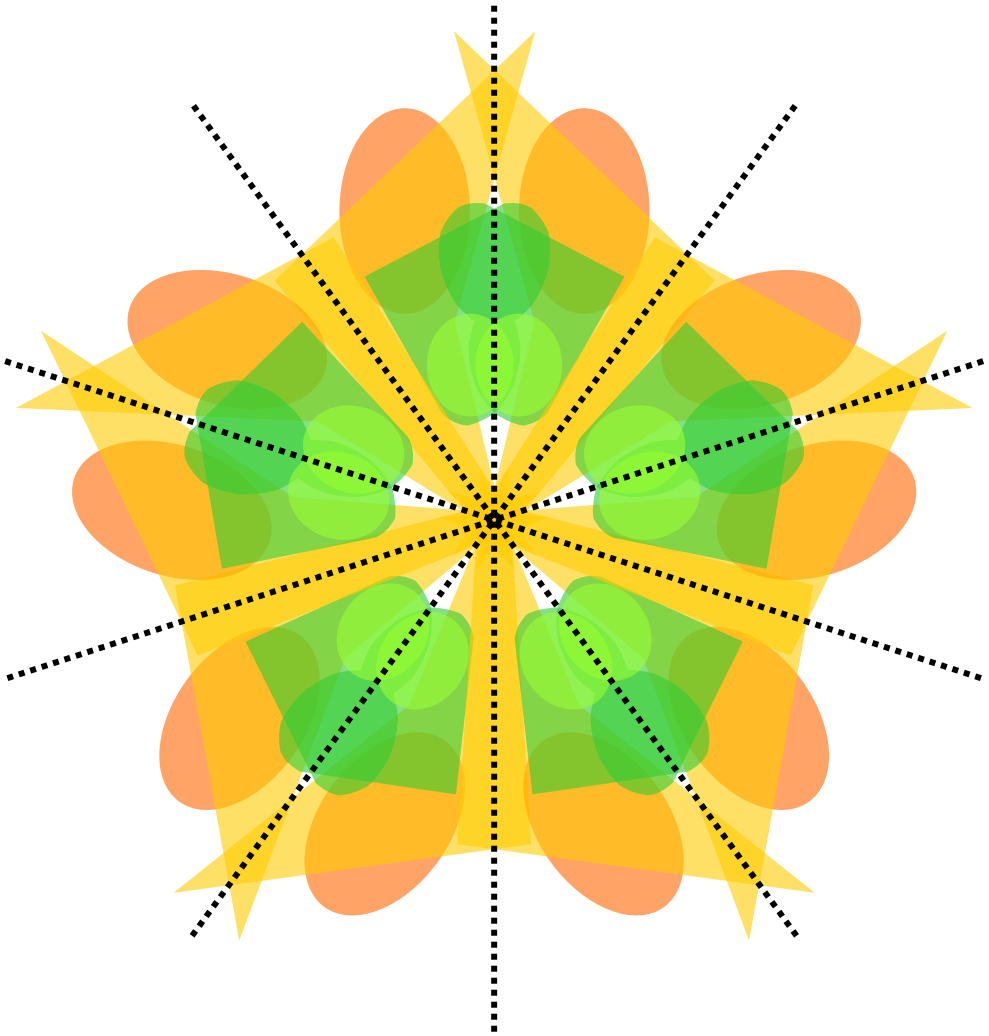
# How many lines of symmetry?



5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