

Module 5 - Lesson 5:

Classify kites and squares based on their properties.

CCSS Standard – 5.G.B.3 / 5.G.B.4

FLUENCY (10-min)

Whiteboard Exchange: Multiply Multi-Digit Whole Numbers



Write and complete the equation by using the standard algorithm.

$$\begin{array}{r} 45 \times 367 \\ \overset{2}{3} \overset{2}{6} 7 \\ \times \underline{11} 45 \\ 1835 \\ + 14680 \\ \hline 16,515 \end{array}$$

$$\begin{array}{r} 35 \times 602 \\ \overset{1}{6} 0 2 \\ \times \underline{35} \\ 13010 \\ + 18060 \\ \hline 21,070 \end{array}$$

FLUENCY (10-min)

Whiteboard Exchange: Round Decimals



Round 2.93 to the nearest **one**:

$$2.93 \approx \underline{\quad \blacksquare \quad}$$

Round 2.93 to the nearest **tenth**:

$$2.93 \approx \underline{\quad \blacksquare \quad}$$

Round to the nearest **one**:

$$4.167 \approx \underline{\quad \blacksquare \quad}$$

$$15.55 \approx \underline{\quad \blacksquare \quad}$$

$$30.458 \approx \underline{\quad \blacksquare \quad}$$

Round to the nearest **tenth**:

$$4.167 \approx \underline{\quad \blacksquare \quad}$$

$$15.55 \approx \underline{\quad \blacksquare \quad}$$

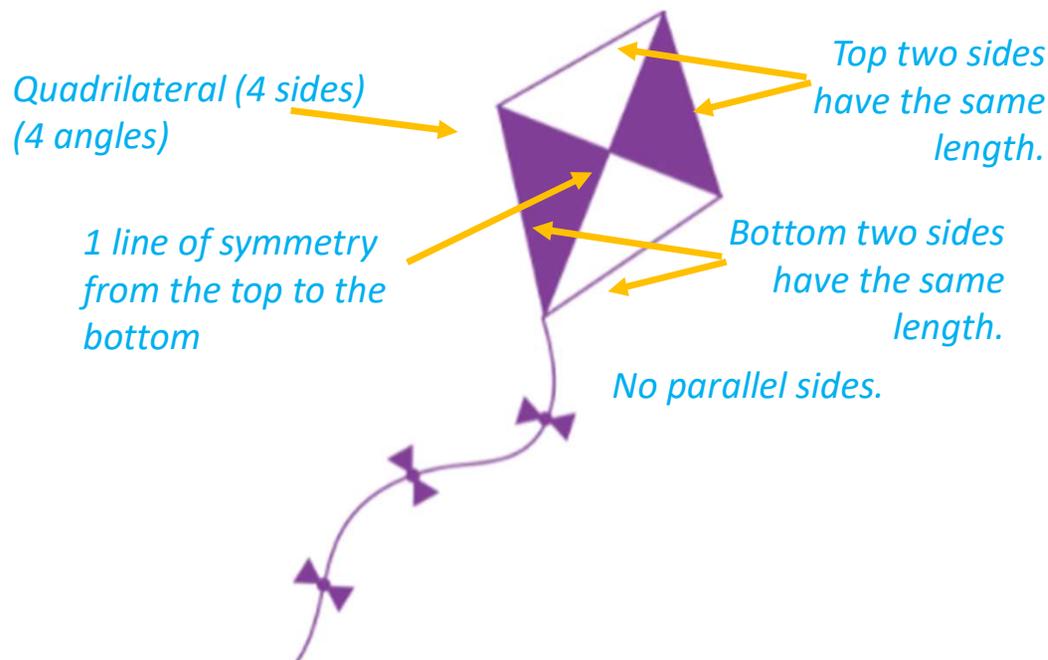
$$30.458 \approx \underline{\quad \blacksquare \quad}$$

LAUNCH (5-min)

Sketch a kite.

Sketch what comes to your mind when I say the word kite.

Look around at other sketches, do you see any similarities or differences?



Not all kites that we fly look like the kite in the picture. Some look like birds, airplanes, or other shapes.

Describe the shape of the kite in this picture:

- It has 4 sides.
- It has 4 angles.
- It is shaped like a diamond.
- It is made up of 4 triangles.

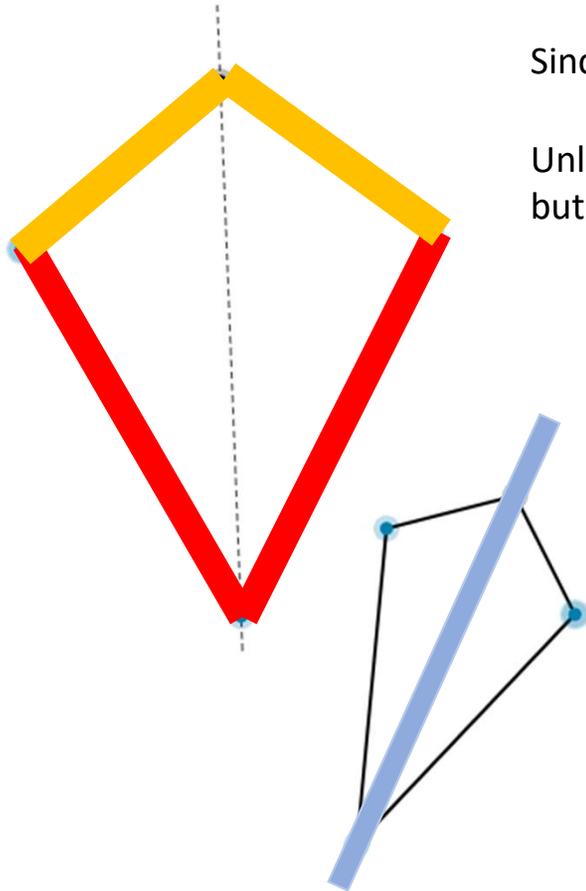
LEARN (35-min)

Construct a Kite

Use interactive Geometry World on
Digital Great Minds.



Let's construct a kite.



Since a kite is a quadrilateral, the interior angles sum to 360 degrees.

Unlike a parallelogram, the sides that have the same length are not opposite of each other, but rather next to each other.

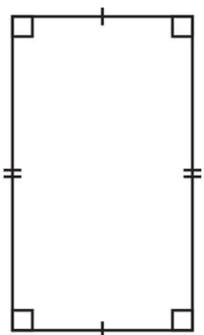
A kite has at least 2 pairs of ADJACENT sides that are the same length. Adjacent means “next to”. Adjacent sides are sides that are next to each other.

A kite has 1 line of symmetry through a diagonal.

LEARN (35-min)

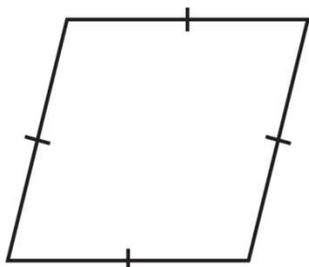
Construct a Square.

Let's see how the kite relates to other quadrilaterals in our hierarchy.



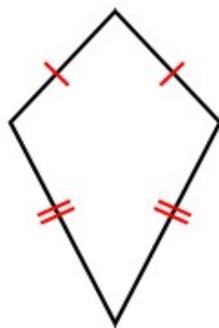
Rectangle
4 right angles

2 lines of symmetry through the midpoints of the sides.



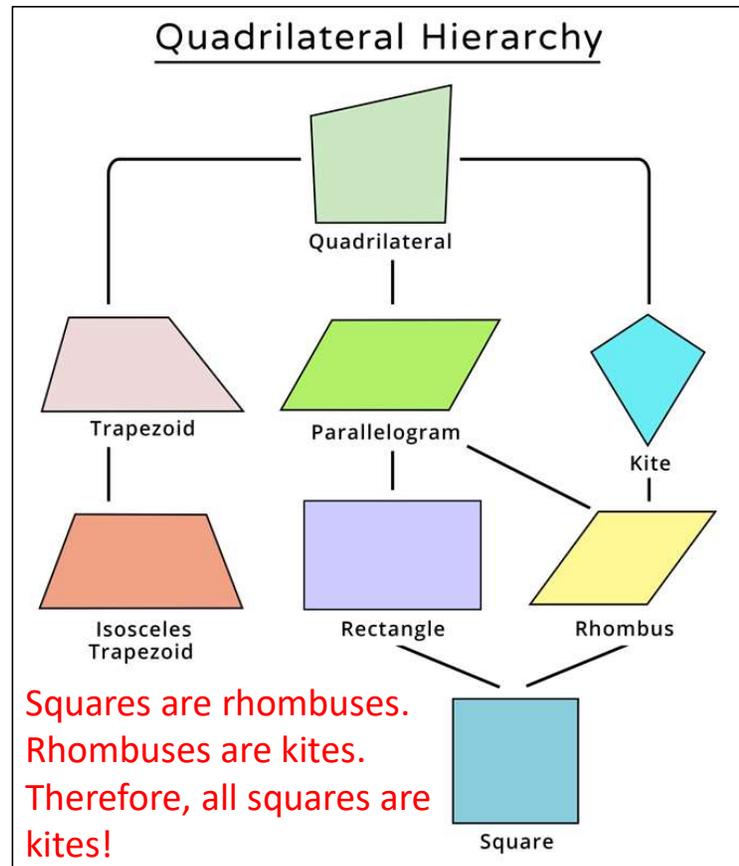
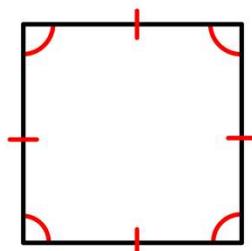
Parallelogram / Rhombus
(all sides the same length)

2 lines of symmetry through their diagonals



Can a rhombus also be classified as a kite?

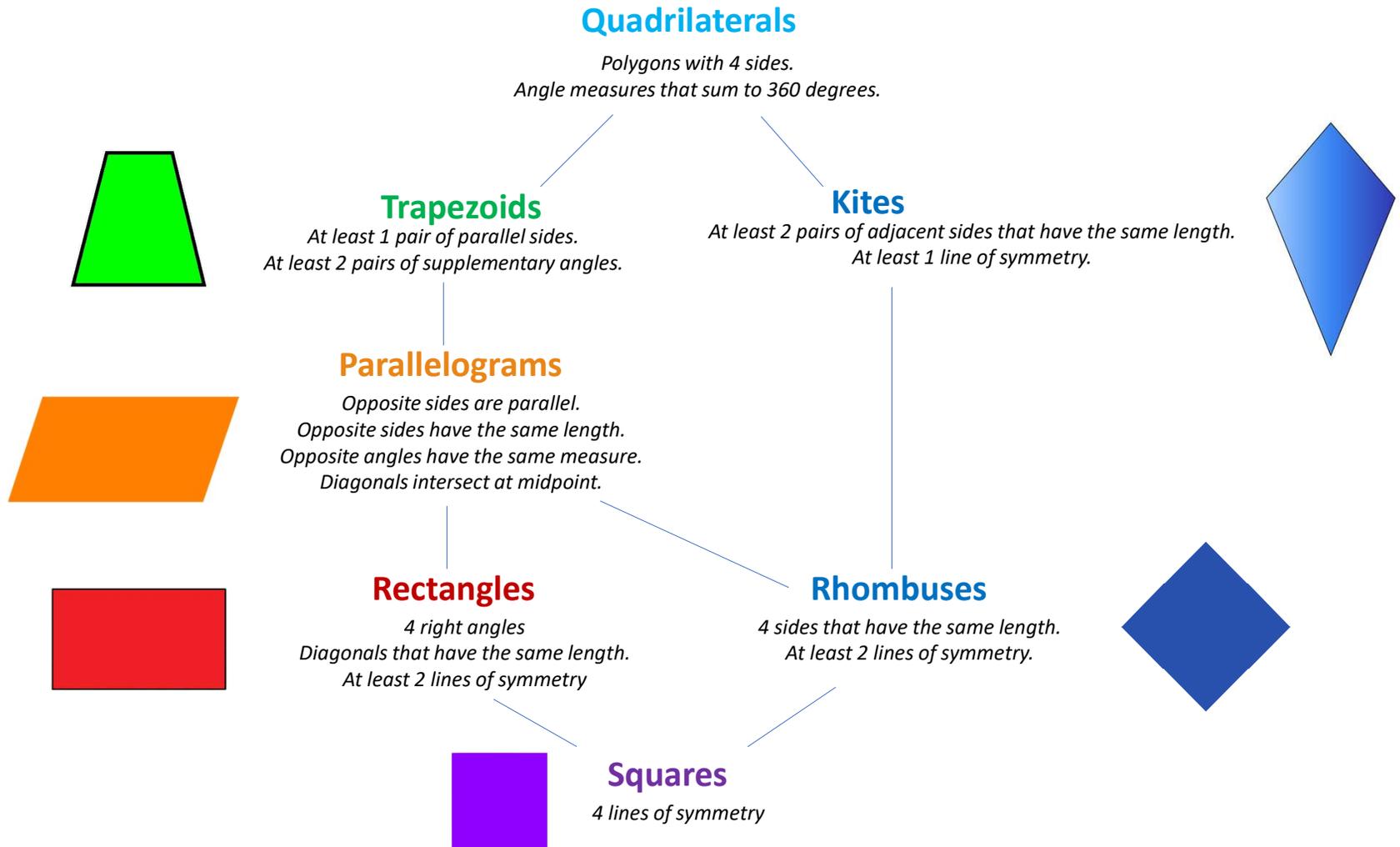
Yes! Since a rhombus has 2 pairs of adjacent sides that are the same length and 1 line of symmetry through a diagonal, it is also a kite! All rhombuses are also kites!



Can a rectangle ever be a rhombus?

Yes! If it is a square. A square also has 2 pairs of adjacent sides the same length and at least 1 line of symmetry through a diagonal.

Hierarchy of Quadrilaterals.



LEARN (35-min)

Hierarchy of Quadrilaterals.

Kites have at least 2 pairs of adjacent sides that are the same length. That makes them a special type of quadrilateral.

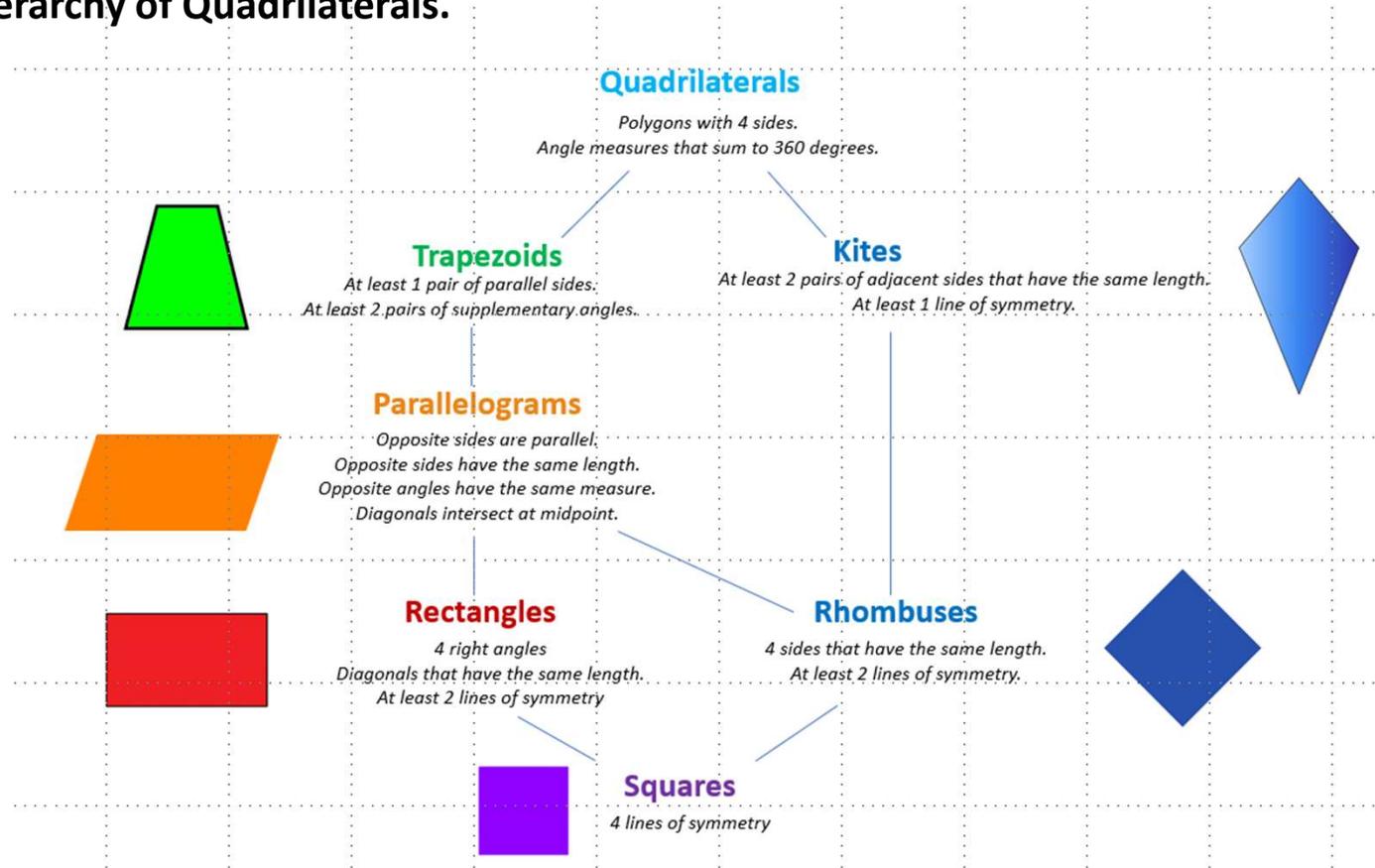
All rhombuses are kites because they have at least 2 pairs of adjacent sides that are the same length.

All squares are trapezoids.

All squares are parallelograms.

All squares are rectangles.

All squares are kites.



LEARN (35-min)

Hierarchy of Quadrilaterals.

How may you use your knowledge of the hierarchy of quadrilaterals to identify the names of the quadrilaterals? Say whether you **AGREE** or **DISAGREE** with the following statements:

Quadrilaterals B and C are **parallelograms**.

Yes, both quadrilaterals have opposite sides that are parallel.

Quadrilateral A is a **kite** because it has 2 angles that have the same measure.

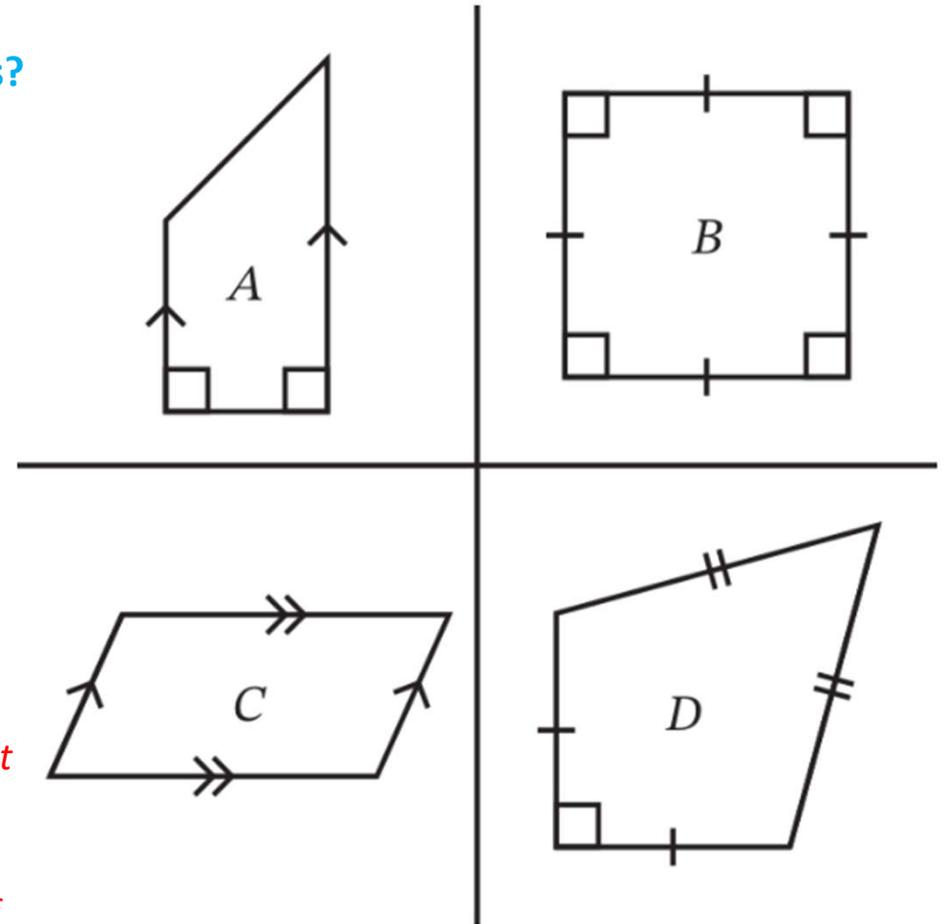
No. Figure A does not have 2 pairs of adjacent sides that are the same length. It is a trapezoid.

Quadrilateral B is not a **kite**.

No. All squares are kites because a square has 2 pairs of adjacent sides the same length.

Quadrilateral D is not a **trapezoid**.

Correct, it is not a trapezoid. It does not have at least one pair of parallel sides. It is a kite.



LAND (10-min)

Exit Ticket



Exit Ticket – PAGE 39

Small Group Time:

Problem Set Pages 35 - 37

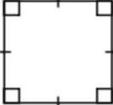
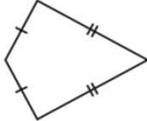
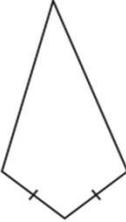
Homework:

Page 35 APPLY BOOK

Name _____ Date _____

 **5**

1. Consider the quadrilaterals shown.



a. Circle each quadrilateral that can be classified as a kite.
b. Write the letter S in each quadrilateral that can be classified as a square.

2. When can a quadrilateral be classified as a kite?

3. When can a rhombus be classified as a square?