

Lesson 177

4 Types with 4 Sides

In the previous Lesson, we learned a little bit about various polygons, and now we're going to take a closer look at different types of quadrilaterals.

Remember, a quadrilateral is a polygon with 4 sides. There are four basic types of quadrilaterals:

First, there are parallelograms. Remember, lines or sides that run parallel to one another run side-by-side; they never touch.

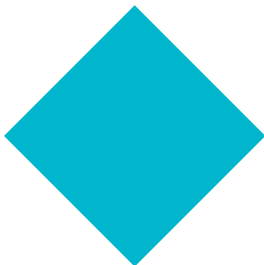
A **rectangle** is also a type of quadrilateral, and it has 2 pairs of parallel sides, and each pair of sides must be equal, but it must also form 4 right angles:



A **parallelogram** has 2 pairs of parallel sides, and each pair of sides must be equal:



A **rhombus** also has 2 pairs of lines that run parallel, but all 4 sides must be equal to one another:



Finally, a **square** has 2 pairs of parallel sides, all 4 sides must be equal, and it must also form 4 right angles:

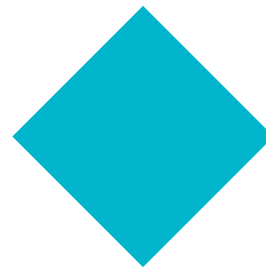


These shapes can be laid out, or oriented, in many different ways.

For example, this square:



Can be turned up on its corner:



And still be a square.

Look at the two rhombuses below:



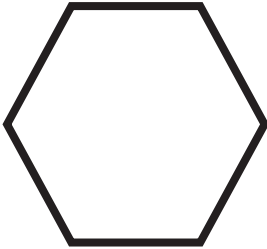
They are both rhombuses, even though one looks like a diamond. That's because both have four identical lines, and two pairs of identical angles.

Lesson Wrap-Up: Go over all of the definitions for each type of quadrilateral. Remember, only squares and rectangles are required to have right angles, and only squares and rhombuses must have four equal sides.

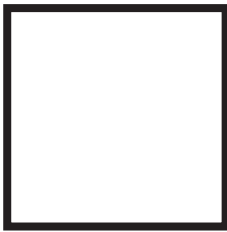
Quadrilateral Practice Worksheet

Tell whether or not each shape is a quadrilateral

1.



2.

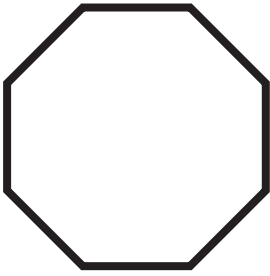


3.

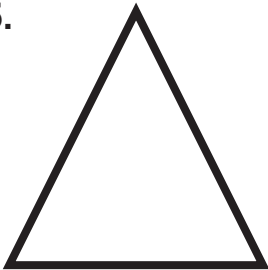


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4.

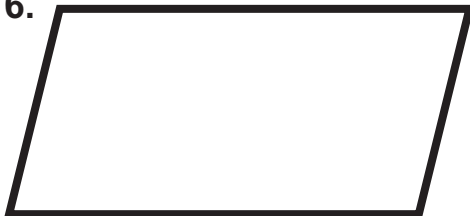


5.



Label each quadrilateral

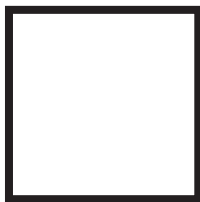
6.



7.



8.

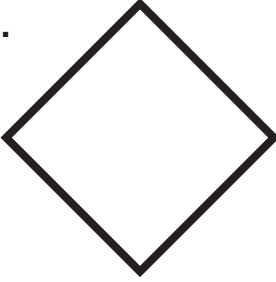


9.



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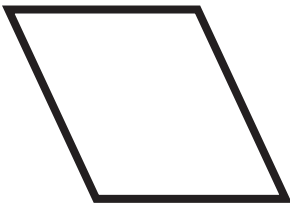
10.



11.



12.



13.



Answer the Following Questions:

14. How is a rhombus different from a square?

15. How is a parallelogram different from a rectangle?

16. How is a parallelogram different from a rhombus?

17. How is a square different from a rectangle?

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18. How are squares and rectangles different from parallelograms and rhombuses?

Draw the following shapes below: Use a ruler to make sure that you have equal sides where needed:

19. Square

20. Rhombus

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