

## Quadrilaterals and Tinker Toys

Name: \_\_\_\_\_ Date: \_\_\_\_\_ :Period: \_\_\_\_\_

1) Construct a Parallelogram using tinker toys. And then draw a quick sketch of what it looks like.

2) List everything you notice about the parallelogram. Is there anything noteworthy about its sides, its angles, etc?

3) Can you construct a Parallelogram whose opposite sides are not congruent? Explain why or why not.

4) What can you conclude about Parallelograms and their opposite sides?

5) Can you construct a Parallelogram whose opposite sides are all the same. Explain why or why not.

6) Is a square a parallelogram or is a parallelogram a square. Explain.

7) Can you construct a Parallelogram whose opposite angles are not congruent. Explain why or why not.

8) What can you conclude about Parallelograms and their opposite angles.

9) Can you construct a Parallelogram that has all congruent angles. Explain why or why not.

10) Is a rectangle a parallelogram or is a parallelogram a rectangle. Explain

11) Is a rhombus a parallelogram or is a parallelogram a rhombus? Explain.

12) Construct segments going between the opposite vertices of your parallelogram. Draw a picture of it below.

13) What special qualities do you notice with these two inside segments?

**Below give a definition of the shape with all of its special characteristics.**

13) Parallelogram

14) Square

15) Rectangle

16) Rhombus

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13)Parallelogram

14)Square

15)Rectangle

16)Rhombus

17)Construct a trapezoid and draw a diagram of it below.

18) How is a trapezoid different from a parallelogram?

19) What are some special characteristics you notice about trapezoids?

20) Construct an Isosceles trapezoid, and draw a diagram of it below.

21) What are some special characteristics about an isosceles trapezoid that you notice?

22) Can you construct an isosceles trapezoid whose base angles or top angles are not congruent? Explain why or why not.

23) Construct a kite and draw a diagram of what it looks like below.

24) What special characteristics do you notice about the kite.

25) Can you construct a kite whose opposite sides are parallel? Explain why or why not.

26) Construct a segment between all the opposite vertices of your kite. What do you notice about these segments?