NAME:

**INTRODUCTION**

**Getting used to the quadrilateral properties APP**

Remember this number: 48.95

Go to www.<insert website here>

This app lets you modify quadrilaterals by moving the vertices.

It also lets you know when you have created a “special” quadrilateral

* + Parallelogram,
  + Rectangle
  + Rhombus
  + Square
  + Trapezoid
  + Isosceles Trapezoid
  + Kite

You can move points B, C and D, but not point A

On the left side is some basic information about the quadrilateral you create.

#1 Move **point B to (5,-1).** What shape does the APP say you created?

#2 Move point C until **Diagnal AC is 10** units long, and **BC’s lope is 1.75**.

#3 Move **point D to (-1,4).** What is the measure of angle C?

#4 Does the resulting quadrilateral have any special names?

#5 Move point C to (11,1) What type of special shape does this create?

**PARALLELOGRAMS**



#1 Parallelogram \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Next, you are going to create a parallelogram in the Geogebra APP.

To do this, the opposite sides must be parallel. Check their slopes on the left.

Drag points B, C and D until the opposite sides are parallel.

Use the slopes on the right to make sure the opposite sides are *exactly* parallel.

* slope AB must match slope CD
* slpoe BC must match slope AD

There is more than one correct way to do this.

When you get it right, the APP should tell you that you created a parallelogram.

Does it list any other shapes? If so, change your picture until it lists ONLY parallelogram.

#2 A parallelogram has 5 properties:

1. Opposite sides are parallel (definition)

2. Opposite sides are also \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Opposite angles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Adjacent angles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Diagonals \_\_\_\_\_\_\_\_\_\_\_

How do fill out

1-5?

It’s easy, look at the information on the left

Are sides/angles equal? Which ones?

Do angles add to 90 or 180?

Diagonals are perpendicular?

[](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjB-YKawf_KAhWotYMKHSk0CJoQjRwIBw&url=https%3A%2F%2Fwww.123rf.com%2Fphoto_29760633_stock-vector-confused-cartoon-monkey-vector-clip-art-illustration-with-simple-gradients-all-in-a-single-layer.html&bvm=bv.114195076,d.amc&psig=AFQjCNHpguGrozTRLt1j0FsNLt8Wp4RQOg&ust=1455822935829289) Diagonals are congruent?

Are certain lines parallel (same slope)?