

Ms. Wardally, Programming!

What would happen if the user asks a question and the response is stored as answer then checked against a value?

TOPIC: Inputs and Conditionals

LEARNING OBJECTIVES:

Specific: Explain interactive computer programs.

Measurable: Apply Ask and Receive Blocks

Attainable: Utilize simple conditional, if and if-else blocks, to alter control flow in a Snap! program..

Result: Implement user interaction in the shape drawing labs.

Time: Complete within 3 class period

Poll

If it's raining then take your umbrella when you go out. Will you take your umbrella with you today?

- ☐ Yes, get an umbrella
- ☐ No umbrella today

SCIENCE > TECHNOLOGY & ENGINEERING

Coding: Conditionals

ASSIGN

TEACHER RESOURCES



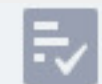
VIDEO



VOCAB CARDS



VOCAB GAME



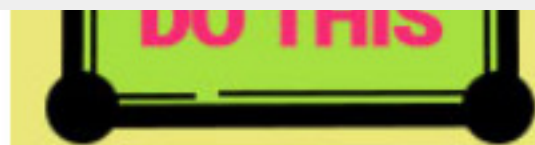
QUIZ



LYRIC LAB



<https://www.flocabulary.com/unit/coding-conditionals/>



LYRICS



QUICK REVIEW

DISCUSS



Conditional Statements

Define CONDITIONAL :

A block used to make a choice between executing two different chunks of code.

1) If simply chooses between executing code or not.

2) If-else provides a choice between two code paths. Only one of the bodies, either the if slot or the else slot, will ever be executed.

Relational Operators (<, >, and =).



If Block



If Else Block

User Interaction

So far, our programs have had minimal interactivity.

There was some user interaction in the shape drawing labs, but no back and forth — just pushing a key to trigger an action.

The ask _ and wait block: functions similar to the say block but waits for a response from the user.

The response is stored in the answer block and can be referenced later. Only one answer is stored at a time, and asking a new question deletes the previous answer.



Ask Block



Say Block



Answer Block

What Shape Are you thinking of?

1. Write a program that tells the user to THINK of a shape. Then ASK them how many sides it has.

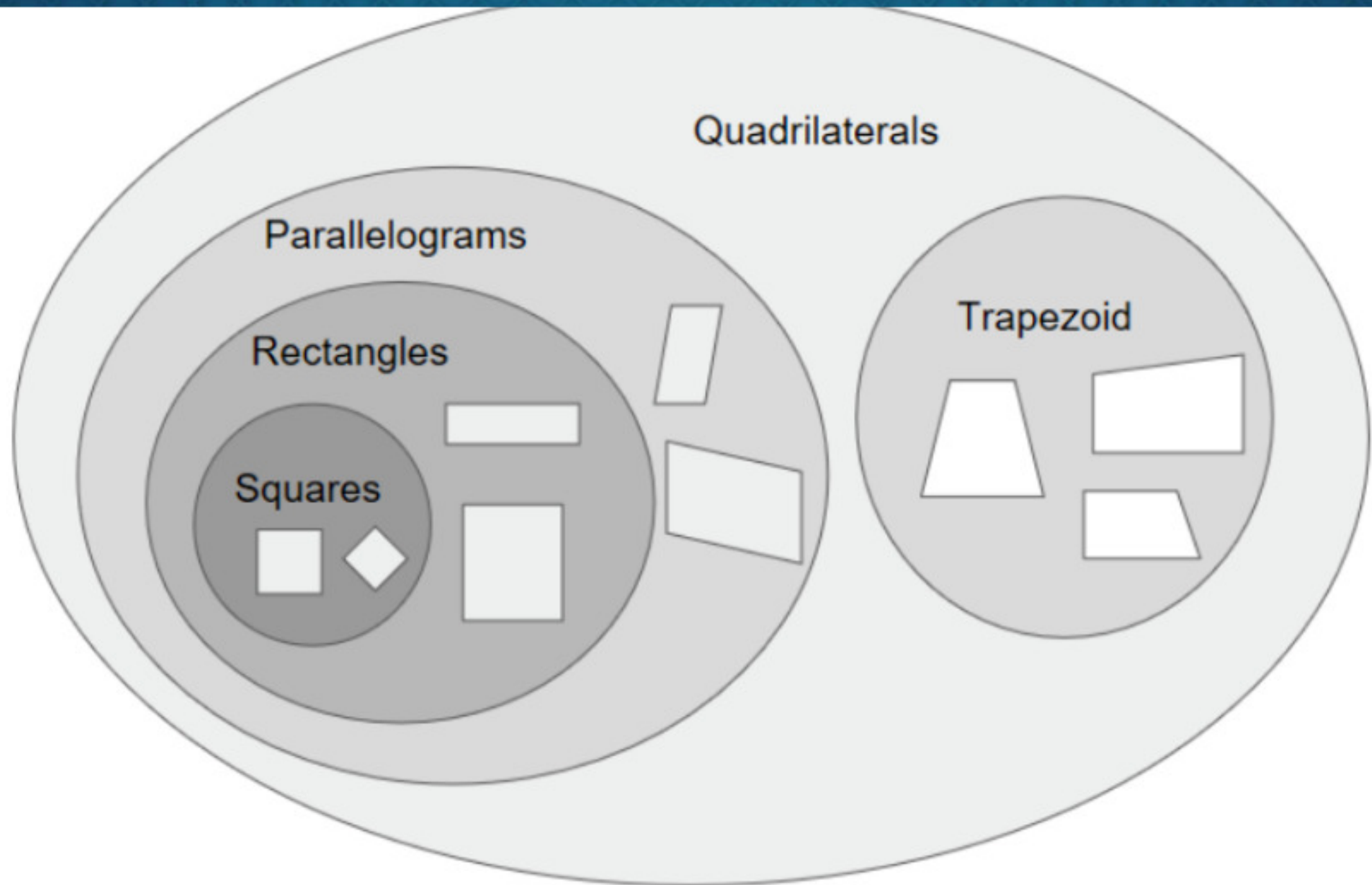
Example: If the user answers 3, then tell him or her that their shape is a triangle. Regardless of whether or not the shape was a triangle, thank the user for playing.

2. Add to your program: so that instead of just deciding if a shape is a triangle or not, your program will be able to name the specific polygon. Your program must be able to identify at least the following shapes:

Number of sides	Polygon name
3	Triangle
4	Quadrilateral
5	Pentagon
6	Hexagon
any other number	Unknown

Save As: What Shape__

Quadrilaterals Sets



Name: _____ PD: _____ Date: _____

Quadrilaterals Review:

How many **sides** are equal in a square? _____

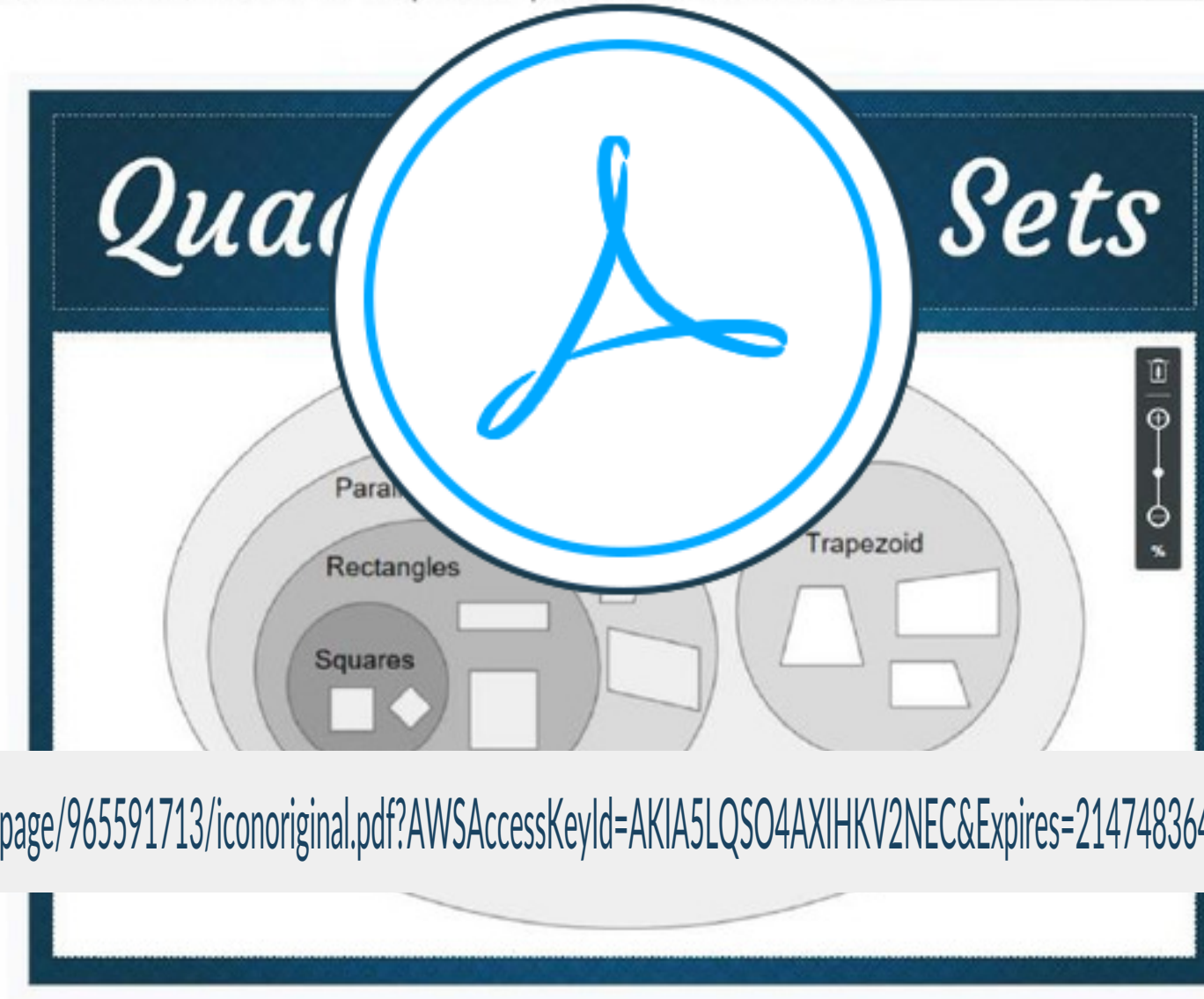
How many **angles** are equal in square? _____

How many **sides** are equal in a rectangle? _____

How many **angles** are equal in a rectangle? _____

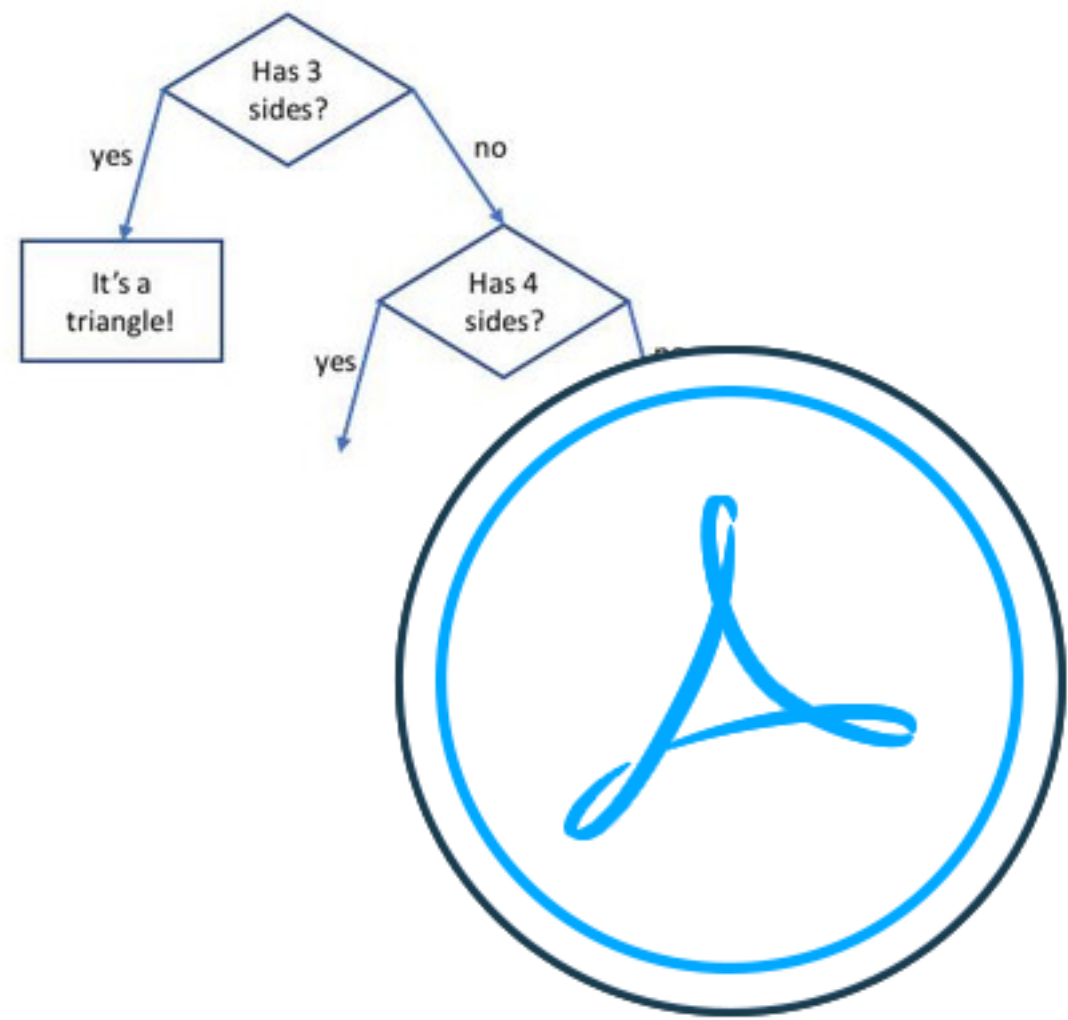
Are all the sides parallel to each other in a
Parallelogram? _____

Are at least 2 sides of Trapezoid parallel to each other? _____



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Name: _____ PD: _____ Date: _____



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- ☐ Has 5 sides?
- ☐ Has 6 sides?



- ☐ It's a quadrilateral!
- ☐ It's a pentagon!
- ☐ It's a hexagon
- ☐ It's something else

Quadrilaterals

Quadrilaterals come in many different varieties. Add scripting to your program so that, if the user is thinking of a quadrilateral, you ask more questions to find out which type of quadrilateral it is.

Your program should give the most specific name that applies to the quadrilateral. The following table describes the quadrilaterals you should know about from most to least specific.

Property	Quadrilateral name
All four sides have the same length and all four angles have the same measure	Square
Not a square and all four angles have the same measure	Rectangle
Not a rectangle and each side is parallel to one other side	Parallelogram
Not a parallelogram and two sides are parallel to each other	Trapezoid
Not a trapezoid	Unknown quadrilateral

Save As: New What Shape__