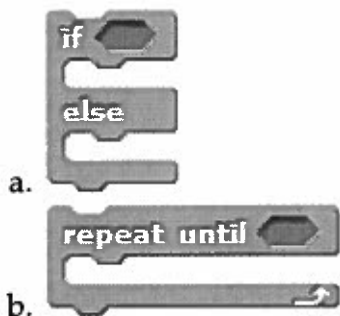


3. (100 points) For each block shown, write a small program. It should do something meaningful using the block.

Share a screenshot of your script (you do not need to share the stage), and explain in 1-2 sentences what your program does.

Then, in your own words explain what the block shown is used for.



a) Checks for divisibility in number

Gets numbers from user to see if the number can be divided without a fraction

b) Uses user input to find the exponent of a number. User puts in a number and exponent to set the value

4. (100 points) Read the following plain-English programming specification.

Ask the user to provide a positive number.

Sum each number between 1 and the provided number

(with 1 and the number included) that is divisible by 3,
then print the final sum.

Answer these questions about what you will need to solve this problem's specification when programming, and how you recognized that information:

- a. What variables will you need for this problem? What words/phrases in the problem prompt led you to this conclusion?

num = provide positive number

count = 1 - num sum = final sum

- b. Will we need a loop to solve this problem? If so, what is the condition that keeps the loop repeating? What words/phrases in the problem prompt led you to this conclusion?

yes we will need a loop, count \leq num

1 - provided number

- c. Will we need if statements to solve this problem? If so, what conditions do they need? What words/phrases in the problem prompt led you to this conclusion?

we will need an if statement, if sum/3 mod = 0

that is divisible by 3

- d. What math operations need to be done? What words/phrases in the problem prompt led you to this conclusion?

sum = sum + count

sum each number

count = count + 1

between 1 and provided number

- e. What information throughout the problem will need to be output? What words/phrases in the problem prompt led you to this conclusion?

final sum

print the final sum