

LTEC-2 G4 Early Assessment (2019-2020)

Name: _____

In Problems 1 and 2, circle True or False.

1.

| | |
|--------------|--|
| True / False | In this Scratch block  "perimeter" is a variable. |
|--------------|--|

2.

| | |
|--------------|--|
| True / False | A computer program cannot be broken down into smaller parts. |
|--------------|--|

3.

A formula for calculating the perimeter of a rectangle is
$$\text{perimeter} = \text{length} + \text{width} + \text{length} + \text{width}.$$

In this formula, what term do we use to describe *length*?

- A) Loop
- B) Sprite
- C) Variable
- D) Block

4.

Fill in the blanks to make conditional statements that are valid.

- a. If _____, then put on a jacket.
- b. If I see a spider, then _____.

5.

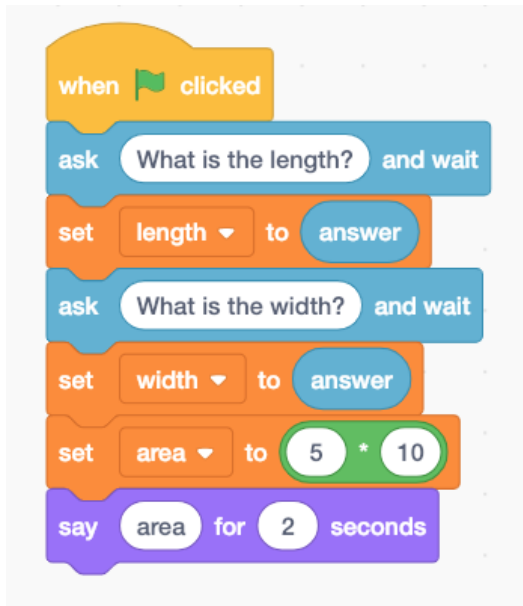
Which statement is a conditional?

- A) If number is 10, then say "hello world".
- B) If number is 10.
- C) Repeat 2 times: Say "hello world" for 2 seconds.
- D) Say "hello world" for 2 seconds.

6.

Helena wrote this code.

How would you change the code so that it uses the length and width of a rectangle to calculate the area of that rectangle?



7.

Paula bought her 6 friends each an ice cream cone and is taking them over to her friends. She can only carry 4 cones at once. One way to carry the cones is listed below. Write two other ways that Paula can carry the cones without dropping them.

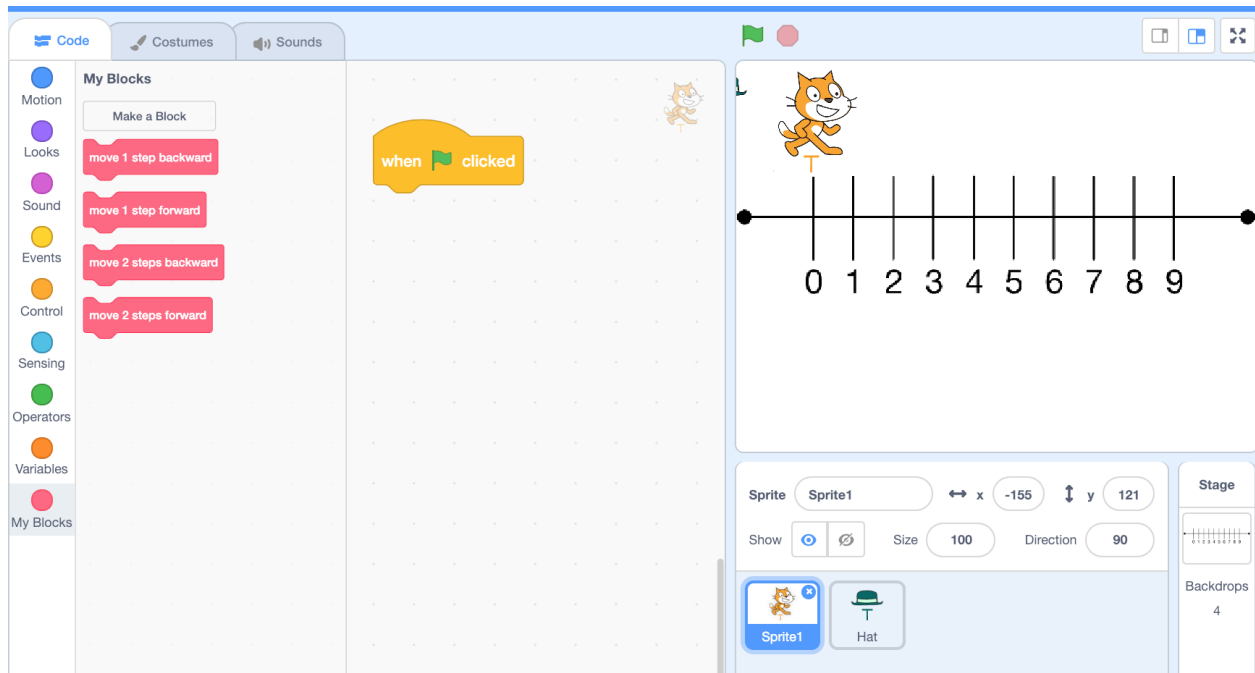
Example:

- Carry 2 cones to her friends
- Carry 1 cone to her friend
- Carry 3 cones to her friends

One way:

Another way:

8.

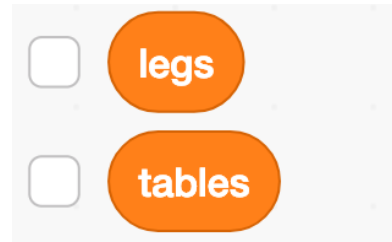
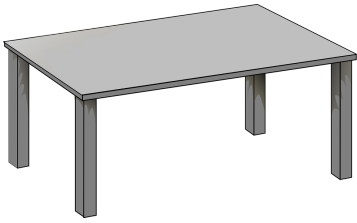


Create 2 different scripts (sets of instructions) to move the cat so that he stops at 5 on the number line. **Use only the blocks shown above.** Write or draw your scripts in the boxes below.

| Script A | Script B |
|--|--|
| <div style="border: 1px solid black; padding: 10px; min-height: 200px;"> <div style="background-color: yellow; border-radius: 10px; padding: 5px; margin-bottom: 10px;">when clicked</div> </div> | <div style="border: 1px solid black; padding: 10px; min-height: 200px;"> <div style="background-color: yellow; border-radius: 10px; padding: 5px; margin-bottom: 10px;">when clicked</div> </div> |

9.

A factory makes tables. Each table has 4 legs. Write instructions to program a computer to ask for the number of tables and then say the number of legs needed. Pretend that the computer has variables named “tables” and “legs.”



Your instructions:

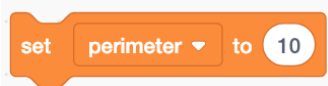
LTEC-2 G4 Early Assessment Answer Key (2019-2020)

Name: _____

In Problems 1 and 2, circle True or False.

1. [V.04.c]

V.04.c [G4 EARLY]

| | |
|--------------|--|
| True / False | In this Scratch block  , “perimeter” is a variable. |
|--------------|--|

2. [DC.05.a]

DC.05.a [G3 EARLY]

| | |
|--------------|--|
| True / False | A computer program cannot be broken down into smaller parts. |
|--------------|--|

3. [V.03.b]

V.03.b [G4 EARLY, G4 MID]

A formula for calculating the perimeter of a rectangle is $perimeter = length + width + length + width$.

In this formula, what term do we use to describe *length*?

- A) Loop
- B) Sprite
- C) Variable
- D) Block

4. [C.06.a]

C.06.a [G4 POST]

Fill in the blanks to make conditional statements that are valid.

- a. If _____ {condition} _____, then put on a jacket.
- b. If I see a spider, then _____ {action} _____.

5. [C.01.a]

C.01.a [G4 MID]

Which statement is a conditional?

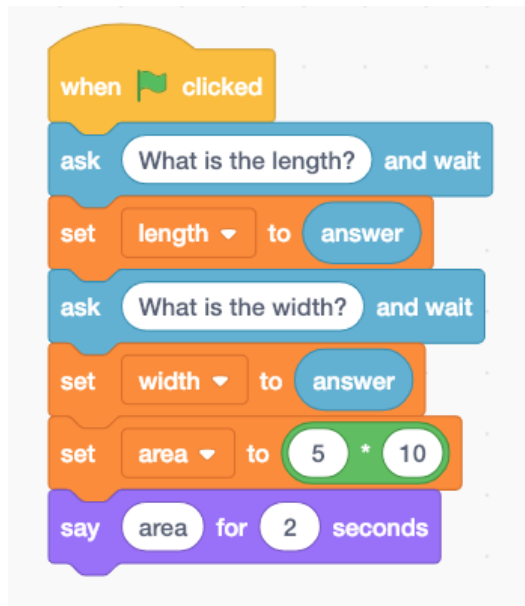
- A) If number is 10, then say “hello world”.
- B) If number is 10.
- C) Repeat 2 times: Say “hello world” for 2 seconds.
- D) Say “hello world” for 2 seconds.

6. [V.07.c]

V.07.c [G4 EARLY, G4 MID]

Helena wrote this code.

How would you change the code so that it would use the user input for length and width of a rectangle to calculate the area of that rectangle?



In the block "set area to 5 x 10" I would replace the 5 with the length variable and the 10 with the width variable.

7. [S.04.d]

S.04.d [G4 EARLY]

Paula bought her 6 friends each an ice cream cone and is taking them over to her friends. She can only carry 4 cones at once. One way to carry the cones is listed below. Write two other ways that Paula can carry the cones without dropping them.

Example:

- Carry 2 cones to her friends
- Carry 1 cone to her friend
- Carry 3 cones to her friends

One way:

*Students can provide any combination such that when summed they equal 6, but no step can exceed 4 cones.

Carry 4 cones to her friends

Carry 2 cones to her friends

[OR]

Carry 3 cones to her friends

Carry 2 cones to her friends

Carry 1 cone to her friends

Another way:

*Students can provide any combination such that when summed they equal 6, but no step can exceed 4 cones.

Carry 3 cones to her friends

Carry 1 cones to her friends

Carry 1 cone to her friends

Carry 1 cone to her friends

[OR]

Carry 1 cone to her friends

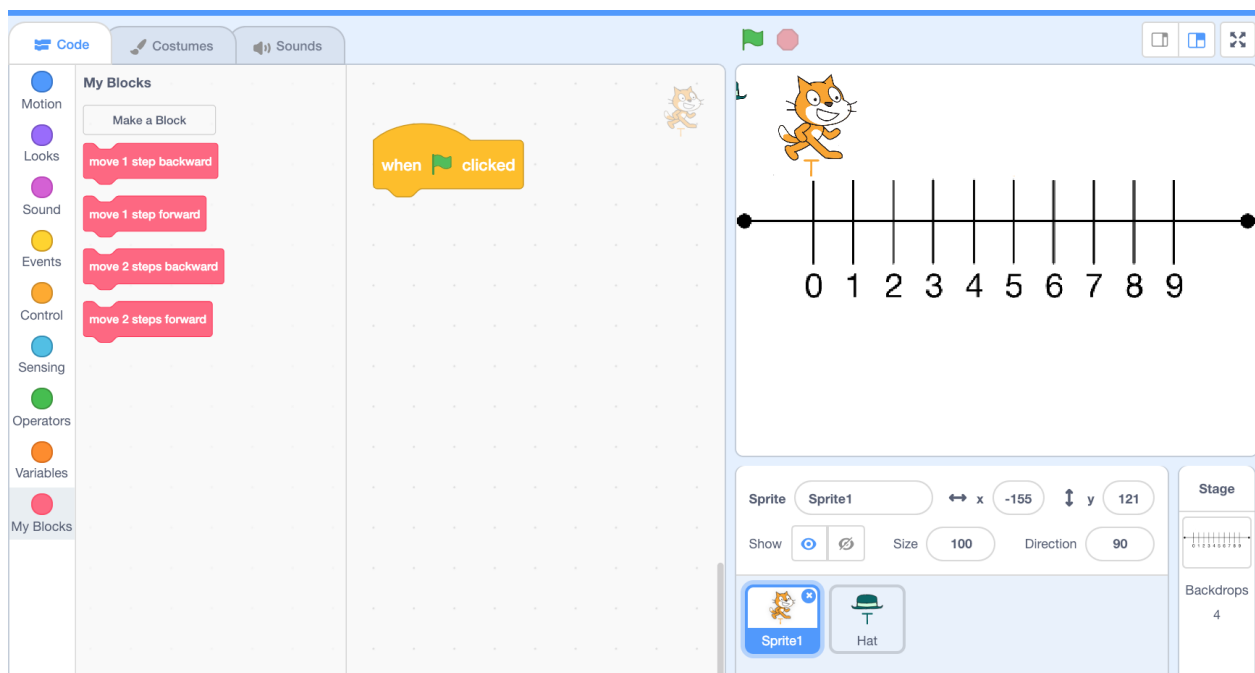
Carry 1 cone to her friends

Carry 2 cones to her friends



Carry 2 cones to her friends

8. [S.01.a]

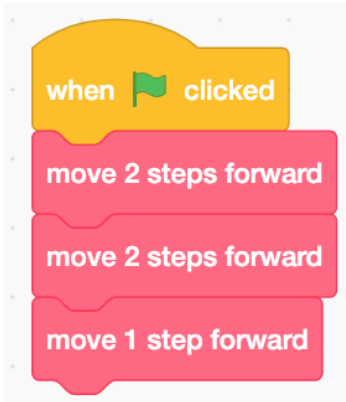
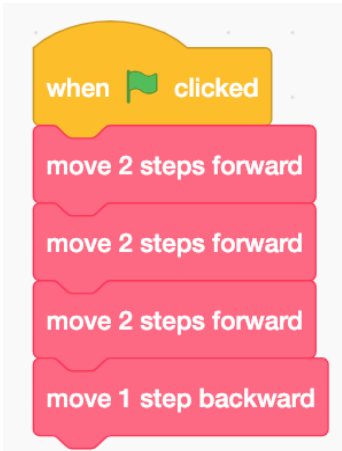
Task S.01.a [G3 EARLY, G3 MID]



Create 2 different scripts (sets of instructions) to move the cat so that he stops at 5 on the number line. **Use only the blocks shown above.** Write or draw your scripts in the boxes below.

| Script A | Script B |
|---|--|
|  |  |

*Exemplar response**

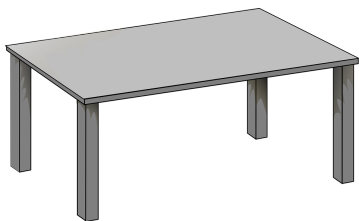
| Script A | Script B |
|--|---|
|  |  |

*any combination of forward and backward steps is acceptable as long as the cat stops at 5.

9. [V.14.a]

V.14.a [G4 POST]

A factory makes tables. Each table has 4 legs. Write instructions to program a computer to ask for the number of tables and then say the number of legs needed. Pretend that the computer has variables named “tables” and “legs.”



| | |
|--------------------------|--------|
| <input type="checkbox"/> | legs |
| <input type="checkbox"/> | tables |

Your instructions:

Ask for number of tables
Set "tables" variable to the answer/ number
Set "legs" variable equal to 4 x "tables"
Say "legs"