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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » The Joy of Computing using Python (course)

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## Course outline

### About NPTEL ()

### How does an NPTEL online course work? ()

### Week 0 ()

### Week 1 ()

☐ Introduction to  
Programming  
(unit?  
unit=17&lesson=18  
)

☐ Why  
Programming?  
(unit?  
unit=17&lesson=19  
)

☐ Programming for  
Everybody (unit?  
unit=17&lesson=20  
)

☐ Any Prerequisites?  
(unit?  
unit=17&lesson=21  
)

☐ Where to start?  
(unit?  
unit=17&lesson=22  
)

☐ Why do we have  
so many  
languages? (unit?)

# Week 1 : Assignment 1

Your last recorded submission was on 2024-07-18, 16:53 IST

Due date: 2024-08-07, 23:59 IST.

1) The cat wants to move 100 steps away slowly, and by the time it finishes moving 100 steps, it needs **1 point** to slowly rotate as well towards the opposite direction. Can both these tasks be accomplished by using single loop in scratch?

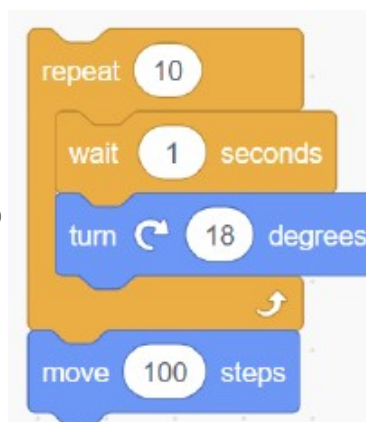
☒ Yes

☐ No

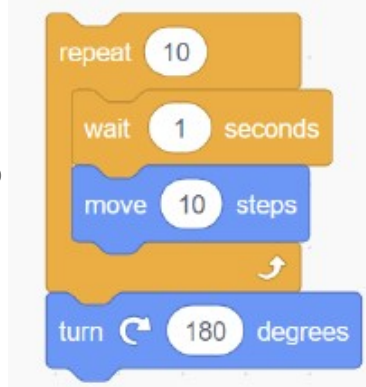
2) Which block moves the cat as described in the previous question ?

**1 point**

☐



☐



unit=17&lesson=23  
)

☐ How to go about programming?  
(unit?  
unit=17&lesson=24  
)

☐ Why to learn programming?  
(unit?  
unit=17&lesson=25  
)

☐ What is programming?  
(unit?  
unit=17&lesson=26  
)

☐ How to give instructions? (unit?  
unit=17&lesson=27  
)

☐ Introduction to Scratch (unit?  
unit=17&lesson=28  
)

☐ Introduction to Loops (unit?  
unit=17&lesson=29  
)

☐ More about Loops (unit?  
unit=17&lesson=30  
)

☐ Solution to Looping Problem (unit?  
unit=17&lesson=31  
)

☒ Scratch :  
Animation 1 (unit?  
unit=17&lesson=32  
)

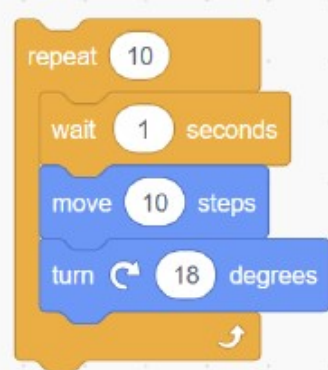
☒ Scratch :  
Animation 2 (unit?  
unit=17&lesson=33  
)

☐ Scratch :  
Animation 3 (unit?  
unit=17&lesson=34  
)

☐ More on Scratch (unit?  
unit=17&lesson=35  
)

☒ Quiz: Week 1 :  
Assignment 1  
(assessment?  
name=443)

☒

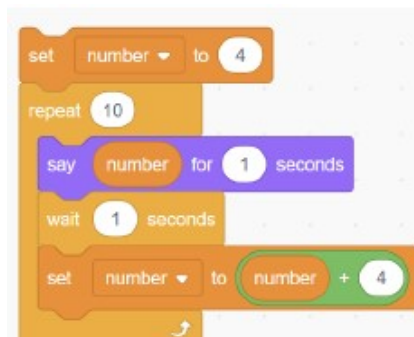


☐



3) What does the cat say here ?

1 point



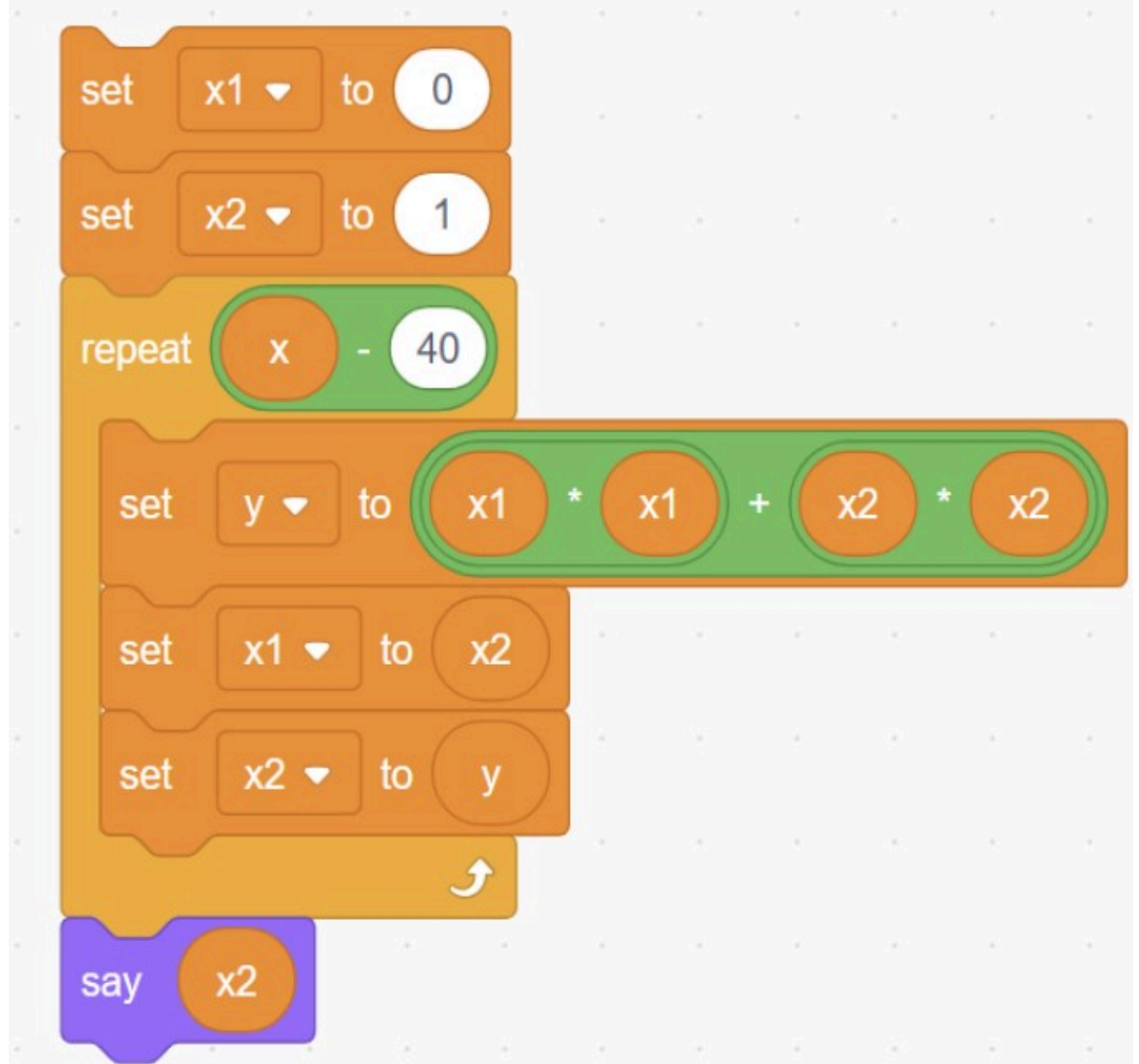
- ☐ Says the number 4, for 1 second, 10 times and changes the value of number variable by multiplying previous value with 4.
- ☒ Says the number 4, for 1 second, 10 times and changes the value of number variable by adding previous value with 4.
- ☐ Says the number 4, and its multiples each for 1 second, till 40 and changes the value of number variable by multiplying previous value with 4.
- ☐ Says the number 4, and its multiples each for 1 second, till 40 and changes the value of number variable by adding previous value with 4.

4) From the previous question, what is the value of number variable after the loop ends ?

1 point

- ☐ 40
- ☒ 44
- ☐ 36
- ☐ 4

5) Let answer for previous question be stored in variable x, what does the cat say after the execution of the loop ? 1 point



- ☐ 16
- ☐ 5
- ☒ 29
- ☐ 44

6) Which of the following is use case of variables in programming.

1 point

- ☐ They are used to make the computer store program data into SSD.
- ☒ They help in storing and retrieval of information/data while a task on the machine is running.
- ☐ They simplify a task which involves processing repetitive procedures.They simplify a task which involves processing repetitive procedures.
- ☐ They help in running multiple tasks parallel to each other.

7) What is the concept that helps in instructing the computer to execute repetitive tasks ?

1 point

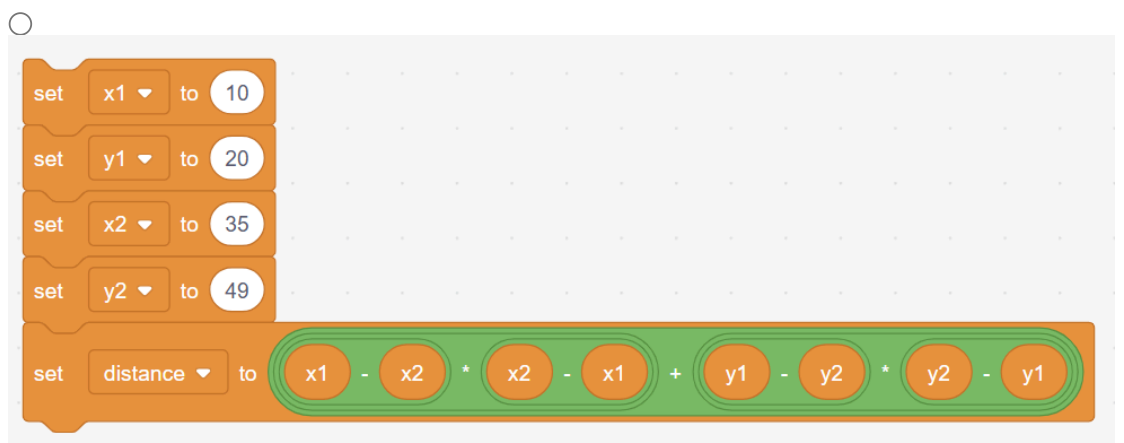
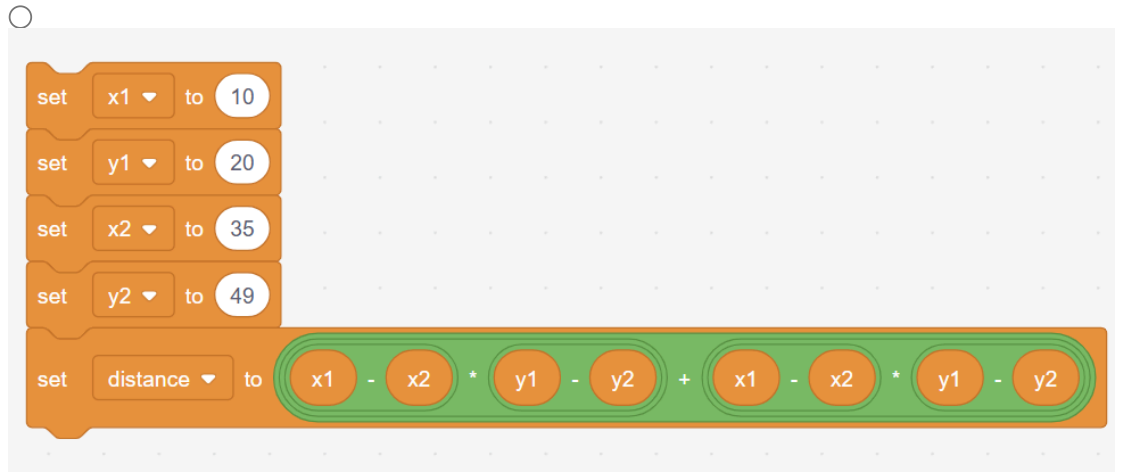
- ☐ Functions
- ☐ Variables
- ☐ Conditionals
- ☒ Loops

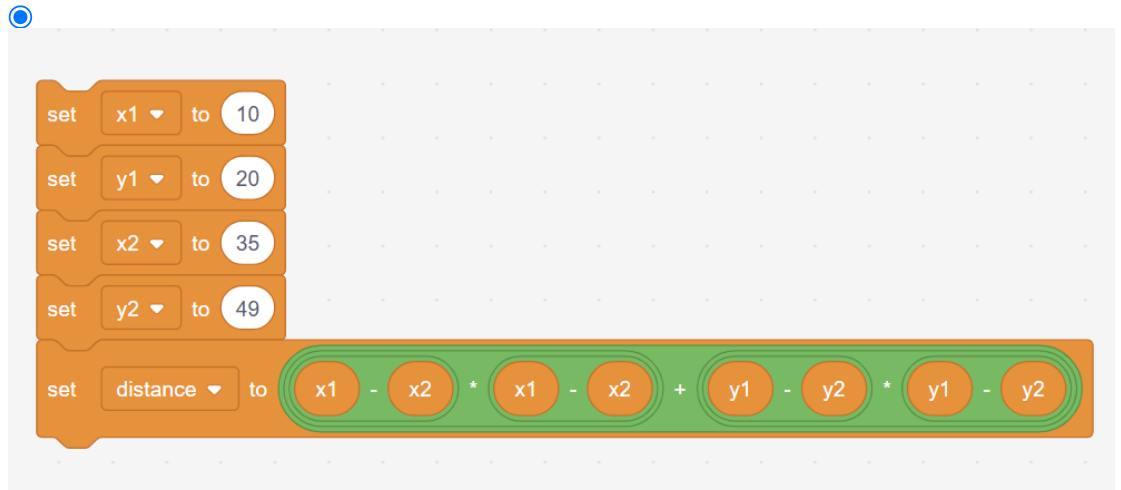
8) Can polynomial expressions be instructed to computer in logically finite steps ?

1 point

- ☒ Yes
- ☐ No

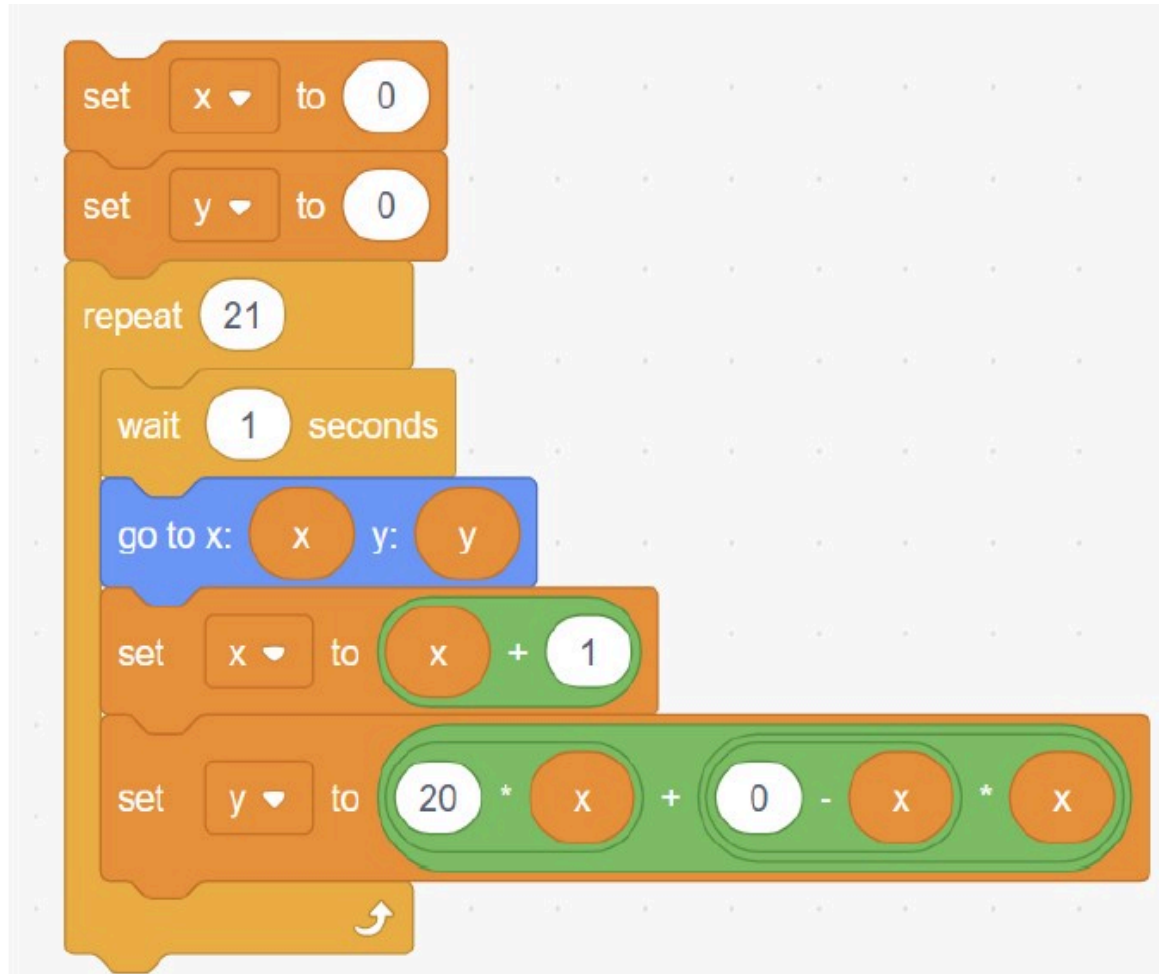
9) In which of the following code blocks **calculation** of the squared distance between two points (10, 20) and (35, 49) is accomplished. **1 point**





10) What task does the block below accomplish ?

1 point



- ☒ Moves the ball in a parabolic path and stops 21 away steps from center(0, 0) in x direction.
- ☐ Moves the ball in a circular path and 21 times.
- ☐ Moves the ball in a triangular path and end at the center (0, 0).
- ☐ Moves the ball in a parabolic path and stops 20 away steps from center(0, 0) in x direction.

You may submit any number of times before the due date. The final submission will be considered for grading.

**Submit Answers**