

Solution Review: Even Squares Not Divisible By Three

This lesson gives a detailed review of how to make a list of even squares using a list comprehension that aren't divisible by three.

WE'LL COVER THE FOLLOWING



- Solution Review: List Comprehension With Predicate
- Solution 2: List Comprehension With Predicate

Solution Review: List Comprehension With Predicate

Use a list comprehension that iterates over a range of 0-21, increments the number in the range by 2 and squares each remaining number. Also, use a predicate clause to check if the squared number is not divisible by 3, then put the number in the list.

`[x*x for x in range(0,21,2) if x%3!=0]`

Diagram illustrating the components of the list comprehension:

- `x*x`: output expression
- `for x`: variable
- `in range(0,21,2)`: reference sequence
- `if x%3!=0`: predicate

The following python code helps to make a list containing even squares that aren't divisible by three:

```
def getSquare():  
    l1 = [x*x for x in range(0, 21, 2) if x % 3 != 0]  
    return l1  
  
print(getSquare())
```



Solution 2: List Comprehension With Predicate

Use a list comprehension that iterates over a range of 0-21, takes the power of each number by 2. Also, use a predicate clause to check if the squared number is not divisible by 3, and it is divisible by 2, then put the number in the list.

variable
↓
[x**2 for x in range(0, 21) if x%3!=0]
↑
output expression reference sequence
predicate
↓

The following python code helps to make a list containing even squares that aren't divisible by three:

```
def getSquare():  
    l1=[ x**2 for x in range(0, 21) if x % 3 != 0 and x % 2 == 0]  
    return l1  
  
print(getSquare())
```



Now that you have an insight of list comprehension, let's move on to the quiz.