More If Statements random numbers assignment

Part 1

With your assigned group:

Create a section of code using all of the concepts of if, elif, else, and, or, >=. <=, ==, >, <.

Each student will paste the code in the box below.

```
if num >= 15 and num <= 20:
  num = num + 3

elif num < 9:
   num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num == 20 or num == 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
```

Part 2

Individually you will answer a series of questions that will be posted soon.

Test Cases/Statements	Explanation

If num = 15
 	
`if num >= 15 and num <= 20:`
`  num = num + 3`
`elif num < 9:`
`   num = num / 2`
`if num > 25 and num < 30:`
`  num = num / 5`
`if num == 25:`
`  num = num * 3`
`if num > 20 and num < 25:`
`  num = num * 4`
`if num > 30:`
`  num = num * 4`
`print(float(num))`
	(This is for the highlighted part of code):
	When x is equal to 15, the code will use the first if statement because 15 fits into the first situation. A number between 15-20, if imputed, the code will print num + 3. In this case 15 + 3 = 18. Since the num has print(float(num)). The number will be 18.0

If num = 5
 	
if num >= 15 and num <= 20:
  num = num + 3
elif num < 9:
  num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num > 20 and num < 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
	(This is for the highlighted part of code):
	When the number is smaller than 9, the number will be used in the elif statement, which is when a num is smaller than 9, the num will be divided by 2. In this case, num = 5, which means the answer will be 5/2 = 2.5. Since the num has print(float(num)). The number will be 2.5

If num = 1
 	
if num >= 15 and num <= 20:
  num = num + 3
elif num < 9:
  num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num > 20 and num < 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
	(This is for the highlighted part of code):
	When the number is smaller than 9, the number will be used in the elif statement, which is when a num is smaller than 9, the num will be divided by 2. In this case, num = 1, which means the answer will be 1/2 = 0.5. This is easily the same as if num was the value of 5 because since both numbers are lower than 9, the test cases will eb the same
	Since the num has print(float(num)). The number will be 0.5. .

If num = 26
 	
if num >= 15 and num <= 20:
  num = num + 3
elif num < 9:
  num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num > 20 and num < 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
	(This is for the highlighted part of code):
	When the num is smaller than 30 and greater than 35, meaning the number is 26, 27, 28, 29, the num will be /5. In this case, since the num = 26, the answer will be 26/5, in decimal numbers = 5.2. Since the num has print(float(num)). The number will be 5.2

If num = 25
 	
if num >= 15 and num <= 20:
  num = num + 3
elif num < 9:
  num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num > 20 and num < 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
	(This is for the highlighted part of code):
	When the num is the value of 25, the number will always got the 3rd if statement which is num == 25, num = num*3. So, 25 * 3 =7 5. In this test case, it is obvious to know that when the number is 25, the output will always be 75. Since the num has print(float(num)). The number will be 25.0

num = 22
 	
if num >= 15 and num <= 20:
  num = num + 3
elif num < 9:
  num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num > 20 and num < 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
	(This is for the highlighted part of code):
	When the number is between 20-25, so 21,22,23,24, the code will always dp num * 4. In this case it would only make sense that 22 would be applied to this part of the code, because it is greater than 20, and less than 25. So 22 * 4 = 88. Since the num has print(float(num)). The number will be 88.0

num = 100
 	
if num >= 15 and num <= 20:
  num = num + 3
elif num < 9:
  num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num > 20 and num < 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
	(This is for the highlighted part of code):
	When the number is greater than 30, so any number above 30, the variable of um will alway be multiplied by 4. So in this test case, if num = 100, 100 * 4= 400 will be the answer of this mathematical expression. Since the num has print(float(num)). The number will be 400.0

num = 0
 	
if num >= 15 and num <= 20:
  num = num + 3
elif num < 9:
  num = num / 2
if num > 25 and num < 30:
  num = num / 5
if num == 25:
  num = num * 3
if num > 20 and num < 25:
  num = num * 4
if num > 30:
  num = num * 4
print(float(num))
	(This is for the highlighted part of code):
	When the number is smaller than 9, the number will be used in the elif statement, which is when a num is smaller than 9, the num will be divided by 2. In this case, num = 0, which means the answer will be 0/2 = 0. This is easily the same as if num was the value of 5 because since both numbers are lower than 9, the test cases will be the same
	Since the num has print(float(num)). The number will be 0.0