Answer the following questions.

```
1function [out1, avg, out3] =deStruct(in)
2 num = length(in);
3 field = fieldnames(in);
4 out1 = [];
5 for i= 1:num
6     if isstruct(in(i).(field{1}))
7           out1 = [out1 in(i).(field{1})];
8     end
9 end
10 rating = [out1.Rating];
11 service = [out1.Service];
12 avg=mean([rating; service]);
13 %part c
14 %part d
15 out3 = {{out1.Name}};
16 end
```

Assume that the above function is defined in the current directory. The following code is then run in the Command Window.

```
>> rest1 =struct('Name', 'Five Guys', 'Rating', 99, 'Service', 99);
>> rest2 =struct('Name', 'iHOP', 'Rating', 50, 'Service', 42);
>> book =struct('Restaurant', {rest1, 'Antico', rest2});

>> [out1, avg, out3] =deStruct(book);
```

a. After the function is run, what are the sizes and classes of `out1` and `out3`?

	`out1`	`out3`
Rows:	1	1
Columns:	2	1
Class:	structure	cell

b. After the function is run, what is the value of `rating`?

```
[99, 50]
```

c. Write a few lines of code to append a new field called `'Average'` to the structure stored in `out1` starting at line 13. The field should contain the restaurant's corresponding average found in the variable `avg`.

```
for i = 1:length(out1)
   out1(i).Average = avg(i);
end
```

d. Write a few lines of code to find the restaurant with the highest rating found in `out1` starting at line 14. Store the name of the restaurant in the variable `best`.

```
      [~, ind] = max(rating);
best = out1(ind).Name;
```

e. Which of the following lines of code removes the `Name` field from `out1`? There is only one correct answer.

- ◯ `rmfield(out1, 'Name')`
- ◯ `out1.Name = []`
- ◯ `out1 = rmfield(out1, 'Name')`
- ◯ `rmfield(out1, Name)`
- ◯ `out1 = rmfield(out1, Name)`