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(J



### **Problem 4**

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#### Problem 4

1/1 point (ungraded)

We also need a representation for a patient that accounts for the use of drug treatments and manages a collection of ResistantVirus instances. For this, we introduce the TreatedPatient class, which is a subclass of Patient. TreatedPatient must make use of the new methods in ResistantVirus and maintain the list of drugs that are administered to the patient.

Drugs are given to the patient using the TreatedPatient class's [addPrescription()] method. What happens when a drug is introduced? The drugs we consider **do not directly kill virus particles lacking resistance to the drug**, but prevent those virus particles from reproducing (much like actual drugs used to treat HIV). Virus particles with resistance to the drug continue to reproduce normally. Implement the TreatedPatient class.

#### Hint: reproduce function child resistances

If you are really unsure about how to think about what each child resistances should be changed to, here is a different approach. If the probability [mutProb] is successful, the child resistance switches. Otherwise, the child resistance stays the same as the parent resistance.

If you want to use numpy arrays, you should import numpy as np and use np.METHOD NAME in your code.

```
# Enter your definitions for the ResistantVirus and TreatedPatient classes in this box.

# Part B: Problem 4

# Bookmark this page

# Part B: Problem 4: TreatedPatient Class

# 10.0/10.0 points (graded)

# We also need a representation for a patient that accounts for the use of drug treatments and manages a rinstances. For this, we introduce the TreatedPatient class, which is a subclass of Patient. TreatedPatient methods in ResistantVirus and maintain the list of drugs that are administered to the patient.

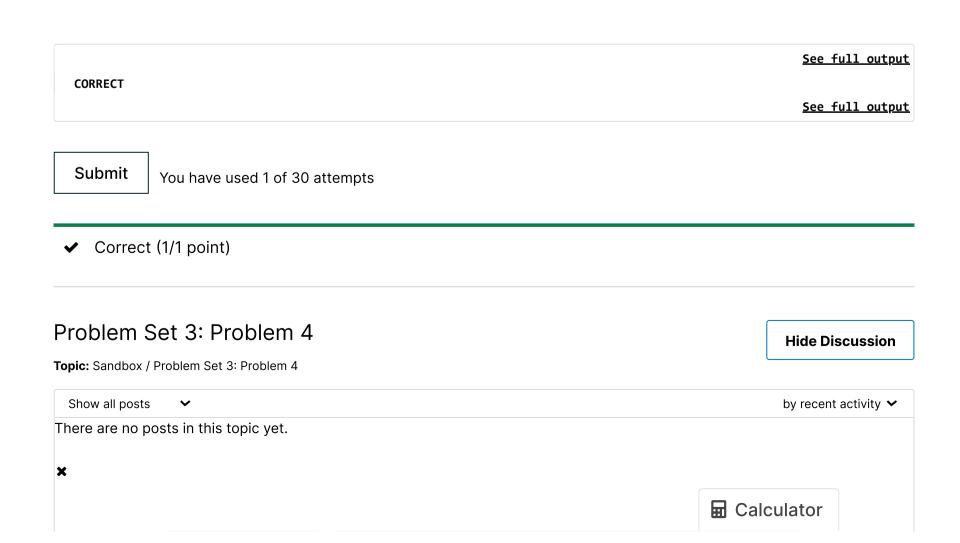
# Drugs are given to the patient using the TreatedPatient class's addPrescription() method. What happens the drugs we consider do not directly kill virus particles lacking resistance to the drug, but prevent thos the patient class.

# Implement the TreatedPatient class.
```

Press ESC then TAB or click outside of the code editor to exit

Correct

#### Test results



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