

Closed book, closed notes, log out of computer! Please write neatly!

9.1 Assuming the following datascience Table is assigned to the variable `table`, indicate which of the statements below are valid. *Select all that apply.* A satisfactory answer requires 3/4 correct.

School	Students	State	Mascot
Middlebury	2549	VT	Panther
Williams	2000	MA	Eph
Amherst	1971	MA	Mammoth
Bates	1821	ME	Bobcat

☐	<code>table["Mascot"]</code> evaluates to <code>array(['Panther', 'Eph', 'Mammoth', 'Bobcat'])</code>
☐	<code>table["Mascot"] == "Panther"</code> will evaluate to <code>True</code>
☐	<code>table.group("State")</code> will evaluate to a table with 4 rows
☐	<code>table["Students"].min()</code> evaluates to 1821

9.2. The beginning of your program defined two 3-element NumPy arrays `a` and `b`. Unfortunately these lines got deleted. But you do know that the arrays contained the integers 1-6, inclusive (each value appeared once). You also know the results of the following expressions. Using the information below infer the values of `a` and `b`.

```
>>> np.max(a)
3
>>> a + 2 * b
array([15, 12,  9])
>>> a**2
array([9, 4, 1])
>>> b / a
array([2.0, 2.5, 4.0])
```

a	
b	

9.3 Using the numbered lines below, rewrite the following function into “plain” Python that does not use NumPy, assuming `a` and `b` are non-empty numeric lists of the same length. If the function returns a vector your function should return a list. Write the line numbers to the right in the correct order and with the correct indentation (indicated by the columns). The first one is entered for you. You may not need all lines on the left, or all rows on the right.

```
def mystery(a, b):
    return np.mean((a-b)**2)

1. c = 0
2. c = []
3. for i in range(len(a)):
4.     def mystery(a, b):
5.         c.append((a-b)**2)
6.         c += (a[i] - b[i])**2
7.     return c / len(a)
8. for i in a:
9.     return c
```

[illegible]