For 35 points, use this webpage to fill in the blanks and answer the questions below.

[learnpython.trinket.io/learn-python-part-7-lists](https://learnpython.trinket.io/learn-python-part-7-lists#/lists/things-that-are-alike)

**Lists**

Python offers a tool called lists to keep track of **related** "things," or values.

NOTE: These are called **arrays** in many programming languages.

A list is a type of container. The things inside a list must be surrounded by

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_\_\_ opens a list and \_\_\_\_\_\_\_\_\_\_\_\_ closes a list.

1. Make a list called animals that contains at least three names of animals (with quotes around them, so that Python recognizes the names as strings.)

2. Make a second list called colors with at least five colors in it. The colors inside the list should be strings too, like "red" or "turquoise".

**Things in a list**

In Python – as in other programming languages – the "things" in lists have a **position**, similar to how a string's characters have positions.

Computer scientists start counting at 0, rather than 1. So the first item in the list is in

position \_\_\_\_\_\_\_\_\_. The second item in the list is in position \_\_\_\_\_\_\_\_\_\_.

If you ask for a position that isn't in the list – say, position 99 of the grades list, Python

returns an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Chicago Temperatures Challenge: Write a few lines of code that subtracts the first (39) and last (37) temperatures stored in the list:

**Adding to a list**

The **append(...)** command adds whatever is in parentheses onto the end of the list.

Give an example of the append command that is different from the example given. Show the contents of the list before and after.

If you want to insert an item at a specific place in a list, use **.insert(POSITION, ITEM)**

Give an example of the **insert** command that is different from the example given. Show the contents of the list before and after.

**Gluing lists together**

There's two ways of adding several things onto a list. Show both ways below with examples.

**Removing from a list**

The **del** command works to remove items from a list. del is short for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show how to remove 7 from numbers = [5,6,7,8,9]

The **pop(...)** command "pops off" the element in the position of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Remove “h” from the list food = [“c”, “h”, “e”, “e”, “s”, “e”] using pop.

Remove the first value from the list food = [“c”, “h”, “e”, “e”, “s”, “e”] using pop.

The **remove(…)** command removes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Remove 3 from odds = [3,5,7,9] using remove.

I want to get rid of all the twos in the numbers list. What happens when I try the following and what do I need to do instead?

numbers = [2,4,8,4,2]

numbers.remove(2)