Worksheet 06: Python List Operations

Name: _____ Date: _____

Instructions

- Answer in the blanks.
- For "write code" questions, write valid Python code.
- For "what does it print" questions, write the exact output.

Part A — Create Lists and Use Indexes

1) Make a list (strings)

Write Python code to create a list named `pets` that contains:

- `"cat"`
- `"dog"`
- `"bunny"`

2) Index practice

Look at the list:

```
colors = ["red", "green", "blue", "yellow"]
```

Fill in the blanks:

- `colors[0]` is _____
- `colors[2]` is _____

- `colors[3]` is _____

---

3) What does this print?

```
fruits = ["apple", "banana", "cherry", "mango"]

print(fruits[1])
print(fruits[0])
```

Output:

---

4) Change an item

What is the final value of `nums` ?

```
nums = [10, 20, 30]

nums[1] = 99
print(nums)
```

Output:

Part B — Add Items with `append`

5) Append once

What does this print?

```
numbers = [1, 2]
numbers.append(3)
print(numbers)
```

Output:

---

6) Append twice

What is the final value of `words` ?

```
words = ["hi"]
words.append("there")
words.append("!")
print(words)
```

Output:

---

7) Append and change

What is the final value of `scores` ?

```
scores = [80, 90]

scores.append(100)
scores[0] = 85
scores.append(95)

print(scores)
```

Output:

Part C — Remove Items with `pop`

8) Pop the last item

What is the output?

```
letters = ["A", "B", "C"]

x = letters.pop()

print(x)
print(letters)
```

Output:

---

9) Pop twice

What is the final value of `items` ?

```
items = ["pen", "pencil", "eraser", "ruler"]

items.pop()
items.pop()

print(items)
```

Output:

---

10) Mix of operations

What is the output?

```
nums = [5, 6, 7]

nums.append(8)
nums.pop()
nums[1] = 99

print(nums)
print(nums[1])
```

Output:

Part D — Traverse a List with `for`

11) Fill in the blanks to print each animal

```
animals = ["lion", "tiger", "bear"]

for _____ in _____:
    print(_____)
```

---

12) What does this print?

```
players = ["Alice", "Bob", "Charlie"]

for p in players:
    print(p)
```

Output:

---

13) Add up numbers in a list

What does this print?

```
nums = [2, 4, 6]

total = 0
for n in nums:
    total = total + n

print(total)
```

Output:

---

14) Copy items using `append`

What does this print?

```
a = [1, 2, 3]
b = []

for x in a:
    b.append(x)

print(b)
```

Output:

Part E — Mini coding tasks

15) To-do list operations (write code)

Write code that does all of these steps:

1. Create a list named `todo` with: `"homework"`, `"piano"`.
2. Append `"game"`.
3. Change `"piano"` to `"reading"`.

4. Pop the last item.
5. Print `todo`.

Your code:

---

16) Challenge: Pop + traversal

What is the output?

```
names = ["Ava", "Ben", "Cara"]

names[1] = "Bob"
names.append("Dana")
removed = names.pop()

print(removed)

for name in names:
    print(name)
```

Output: