

# List Comprehensions Practice Problems

## Solutions:

"""

### 1. Basic List Comprehensions

a. use a basic list comprehension to generate and print the list [8, 6, 4, 2, 0]

b. use a basic list comprehension to generate and print the list [1, 4, 27, 256]

c. use a basic list comprehension to generate and print the list [24, 35, 48]

### 2. List Comprehensions with If Statements

a. use a list comprehension with an if statement to generate and print the list [2, 3, 4, 7, 8, 9]

b. use a list comprehension with an if statement to generate and print the list [10, 9, 8, 3, 2, 1]

c. use a list comprehension with an if statement to generate and print the list [1, 4, 5, 6, 9, 10]

"""

# 1.a.

```
print([a for a in range(8, -1, -2)]) # could have also typed range(8, -2, -2) for the range()
```

# 1.b.

```
print([b ** b for b in range(1, 5)])
```

# 1.c.

```
print([c * c - 1 for c in range(5, 8)])
```

# 2.a.

```
print([a for a in range(2, 10) if a != 5 and a != 6])
```

# 2.b.

```
print([b for b in range(10, 0, -1) if b > 7 or b < 4])
```

# 2.c.

```
print([c for c in range(1, 11) if c != 2 and c != 3 and c != 7 and c != 8])
```