Practice Sheet: if - else

Predict the output carefully before running the code. Focus on the logic and variable changes.

1.
```
num = 17
result = "Even" if num % 2 == 0 else "Odd"
output = result[::-1]
print(output)
```

2.
```
a, b, c = 12, 45, 23
largest = a if (a > b and a > c) else (b if b > c else c)
output = largest * 2 - 10
print(output)
```

3.
```
score = 82
if score >= 90:
    grade = ord('A')
elif score >= 75:
    grade = ord('B')
elif score >= 60:
    grade = ord('C')
else:
    grade = ord('F')
print(grade - 1)
```

4.
```
year = 2024
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    leap = True
else:
    leap = False
result = int(leap) * (year % 100) + 5
print(result)
```

5.

```
number = 30
result = 0
if number % 3 == 0:
    result += 3
if number % 5 == 0:
    result += 5
if number % 7 == 0:
    result += 7
print(result // 2)
```

6.

```
num = -15
status = 1 if num > 0 else (-1 if num < 0 else 0)
print(abs(status) * 5 + status)
```

7.

```
password = "secure123"
strength = len(password) * 2 if len(password) >= 8 else
len(password) - 1
print(strength % 7)
```

8.

```
amount = 3500
discount = 0.20 if amount > 5000 else (0.15 if amount > 3000
else 0.10)
final_price = int(amount * (1 - discount))
print(final_price % 500)
```

9.

```
ch = 'A'
code = ord(ch)
output = (code % 5) * 3
print(output)
```

10.

```
age = 25
multiplier = 2 if age < 13 else (3 if age < 20 else (5 if age <
60 else 7))
result = (age * multiplier) % 100
print(result)
```

11.
```
n = 45
output = (n * 2) if 1 <= n <= 100 else (n // 2)
print(output % 10)
```

12.
```
temp_celsius = 37
state = 0 if temp_celsius >= 100 else (1 if temp_celsius <= 0
else 2)
output = (state ** 2) + temp_celsius % 5
print(output)
```

13.
```
weight = 70
height = 1.75
bmi = weight / (height ** 2)
category = (1 if bmi < 18.5 else 2 if bmi < 24.9 else 3 if bmi
< 29.9 else 4)
print(category * 11 % 13)
```

14.
```
n = 29
is_prime = all(n % i != 0 for i in range(2, int(n ** 0.5) + 1))
result = n * int(is_prime) + (0 if is_prime else 1)
print(result % 20)
```

15.
```
a, b, c = 1, -3, 2
discriminant = b**2 - 4*a*c
roots = (2 if discriminant > 0 else 1 if discriminant == 0 else
0)
print(roots * 7 % 9)
```

16.
```
n = 153
sum_of_powers = sum(int(d)**3 for d in str(n))
result = (sum_of_powers == n)
print((n % 7) if result else -1)
```