1. def calculate_refund(num_small, num_large):
    small_refund = num_small * 0.10
    large_refund = num_large * 0.25
    total_refund = small_refund + large_refund
    return total_refund

def main():
    num_small = int(input("Enter the number of small containers: "))
    num_large = int(input("Enter the number of large containers: "))

    total_refund = calculate_refund(num_small, num_large)

    print("Total refund: ${:.2f}".format(total_refund))

```
if __name__ == "__main__":
    main()
```

2. # Read the cost of the meal from the user
meal_cost = float(input("Enter the cost of the meal: $"))

# Local tax rate (replace 0.08 with your local tax rate)
tax_rate = 0.08

# Compute tax
tax_amount = meal_cost * tax_rate

# Compute tip (18% of meal amount)
tip_amount = meal_cost * 0.18

```
# Compute total cost
total_cost = meal_cost + tax_amount +
tip_amount

# Display the results
print(f"Tax amount: ${tax_amount:.
2f}")
print(f"Tip amount: ${tip_amount:.2f}")
print(f"Grand total: ${total_cost:.2f}")
```

3.
```
# Read the amount in cents from the
user
cents = int(input("Enter the amount in
cents: "))

# Define the denominations of coins
denominations = {
    'toonies': 200,
    'loonies': 100,
```

```
    'quarters': 25,
    'dimes': 10,
    'nickels': 5,
    'pennies': 1
}

# Initialize a dictionary to store the
number of each coin denomination
change = {}

# Calculate the number of each coin
denomination needed
for coin, value in denominations.items():
    num_coins = cents // value
    if num_coins > 0:
        change[coin] = num_coins
        cents -= num_coins * value

# Display the denominations of coins
needed for change
```

```
print("Denominations of coins for
change:")
for coin, num_coins in change.items():
    print(f"{coin}: {num_coins}")
```

4. # Read air temperature in degrees Celsius and wind speed in km/h from the user

```
temperature = float(input("Enter the
air temperature in degrees Celsius: "))
wind_speed = float(input("Enter the
wind speed in km/h: "))

# Check if temperature is less than or
equal to 10 degrees Celsius and wind
speed exceeds 4.8 km/h
if temperature <= 10 and wind_speed >
4.8:
    # Compute wind chill index using the
```

```
given formula
    wind_chill_index = 13.12 + 0.6215 *
temperature - 11.37 * (wind_speed **
0.16) + 0.3965 * temperature *
(wind_speed ** 0.16)

    # Round wind chill index to the
closest integer
    wind_chill_index =
round(wind_chill_index)

    # Display the wind chill index
    print(f"The wind chill index is:
{wind_chill_index}")
else:
    print("The wind chill index is not valid
for the given temperature and wind
speed.")
```

3. # Read the amount in cents from the user
cents = int(input("Enter the amount in cents: "))

# Define the denominations of coins
denominations = {
    'toonies': 200,
    'loonies': 100,
    'quarters': 25,
    'dimes': 10,
    'nickels': 5,
    'pennies': 1
}

# Initialize a dictionary to store the number of each coin denomination
change = {}

```
# Calculate the number of each coin
denomination needed
for coin, value in denominations.items():
    num_coins = cents // value
    if num_coins > 0:
        change[coin] = num_coins
        cents -= num_coins * value

# Display the denominations of coins
needed for change
print("Denominations of coins for
change:")
for coin, num_coins in change.items():
    print(f"{coin}: {num_coins}")
```