EXERCISE-88 Coin Change Problem

PROGRAM;

```
def coin_change(coins, amount):
    dp = [float('inf')] * (amount + 1)
    dp[0] = 0
    for coin in coins:
        for i in range(coin, amount + 1):
            dp[i] = min(dp[i], dp[i - coin] + 1)

    return dp[amount] if dp[amount] != float('inf') else -1
coins = [1, 2, 5]
amount = 11
print(coin_change(coins, amount))
```

OUTPUT

```
3
```

TIME COMPLEXITY $O(\text{amount} \times \text{len(coins)})$