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Period 4

Ch 2 Programming Exercises #1-7, 10, 11

1.
```
def main():
    print("This program converts Celsius to Fahrenheit.")
    celsius = eval(input("What is the Celsius temperature? "))
    fahrenheit = 9/5 * celsius + 32
    print("The temperature is", fahrenheit, "degrees Fahrenheit.")
```

2.
```
def main():
    print("This program computes the average of three exam scores.")
    score1, score2, score3 = eval(input("Enter three scores separated by commas: "))
    average = (score1 + score2) / 2
    print("The average of the scores is:", average)
```

3.
```
def main():
    print("This program converts Celsius to Fahrenheit.")
    for i in range (5):
        celsius = eval(input("What is the Celsius temperature? "))
        fahrenheit = 9/5 * celsius + 32
        print("The temperature is", fahrenheit, "degrees Fahrenheit.")
```

4.
```
def main():
    print("This program converts Celsius to Fahrenheit.")
    celsius = 0
    for i in range(11):
        fahrenheit = 9/5 * celsius + 32
        print(celsius, fahrenheit)
        celsius = celsius + 10
```

5.
```
def main():
    print("This program calculates the future value")
    print("of an investment.")
    principal = eval(input("Enter the initial principal: "))
    apr = eval(input("Enter the annual interest rate: "))
    y = eval(input("Enter the number of years for the investment: "))
    for i in range(y):
        principal = principal * (1 + apr)
    print("The value in", y, "years is: ", principal)
```

6.
```
def main():
    print("This program calculates the future value")
    print("of an investment.")
    principal = eval(input("Enter the amount invested each year: "))
    apr = eval(input("Enter the annual interest rate: "))
    y = eval(input("Enter the number of years for the investment: "))
    for i in range(y):
        a = principal
        principal = principal * (1 + apr)
        currentval = a*i + principal
    print("The value in", y, "years is: ", currentval)
```

7.
```
def main():
    print("This program calculates the future value")
    print("of an investment.")
    principal = eval(input("Enter the initial principal: "))
    rate = eval(input("Enter the annual interest rate: "))
    y = eval(input("Enter the number of years for the investment: "))
    periods = eval(input("Enter the number of times the interest is compounded each year:
"))

    a = periods * y
    b = rate / periods

    for i in range(y):
        principal = principal * (1 + b)**a

    print("The value in", y, "years is: ", principal)
```

10.
```
def main():
    print("This program converts centimeters to inches.")
    cm = eval(input("Enter the number of centimeters: "))
    inches = 0.393701*cm
    print("In inches, that's", inches, "inches long.")
```

11.
```
def main():
    print("This is a calculator.")
```