Question #1

question #1.py *

```python
1  print("PRIME NUMBERS'")
2  i = 2
3  n = int(input("Enter a number (number must be greater t
4  while (i!=1):
5      fac = n%i
6      if (fac==0):
7          n =n/i
8          print(i)
9
10     else:
11         i = i +1
```

```
Python 3.7.4 (bundled)
>>> %Run 'question #1.py'

  PRIME NUMBERS'
  Enter a number (number must be greater than 2:    12
  2
  2
  3


Python 3.7.4 (bundled)
>>> %Run 'question #1.py'

  PRIME NUMBERS'
  Enter a number (number must be greater than 2:    72
  2
  2
  2
  3
  3
```

Question #2

question #2.py ×

```python
1  print("GREATEST COMMOM DIVISOR")
2
3  m = int(input("Enter number"))
4  n = int(input("Enter number"))
5
6  d = min(m,n)
7
8  while (n % d) or (m % d):
9      d = d - 1
10
11 print("The Greatest Common Divisor is", d)
12
```

```
Python 3.7.4 (bundled)
>>> %Run 'question #2.py'

  GREATEST COMMOM DIVISOR
  Enter number12
  Enter number18
  The Greatest Common Divisor is 6

>>> %Run 'question #2.py'

  GREATEST COMMOM DIVISOR
  Enter number128
  Enter number192
  The Greatest Common Divisor is 64
```

Question #3

```
question #3.py *

1   num = 0
2   while True:
3       additionals = input("Are there additional guests? \n press Enter for yes \nPress space for no and then enter \n")
4       if additionals == (" "):
5           print("Cost is $", round(num, 2))
6           break
7       age = int(input("Enter your age"))
8       if age <= 2:
9           num = num + 0
10      elif age >= 3 and age <= 12:
11          num = num + 14.00
12      elif age >= 65:
13          num = num + 18.00
14      else:
15          num = num + 23.00
16
```

```
Enter your age1
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age4
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age20
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age70
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Cost is $ 55.0
```

```
Enter your age12
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age3
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age65
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age2
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age13
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Enter your age64
Are there additional guests?
 press Enter for yes
Press space for no and then enter

Cost is $ 92.0
```

Question #4

question #4.py ×

```python
1  print("Grade Point Average")
2
3  score_table = {
4      "A+":4.0
5    , "A":4.0
6    , "A-":3.7
7    , "B+":3.3
8    , "B":3.0
9    , "B-":2.7
10   , "C+":2.3
11   , "C":2.0
12   , "C-":1.7
13   , "D+":1.3
14   , "D":1.0
15   , "F":0
16  }
17
18  score = []
19  while True:
20      # User inputs Letter Grade
21      grade = input("Grade:")
22      if grade == "":
23          break
24
25      score.append(score_table[grade])
26
27  avg = sum(score) / len(score)
28  # Program will print Average based on sco
29  print("Average:", avg)
```

```
Python 3.7.4 (bundled)
>>> %Run 'question #4.py'

  Grade Point Average
  Grade:C+
  Grade:D
  Grade:A
  Grade:
  Average: 2.433333333333333

>>> %Run 'question #4.py'

  Grade Point Average
  Grade:A
  Grade:B
  Grade:B
  Grade:A
  Grade:
  Average: 3.5

>>> %Run 'question #4.py'

  Grade Point Average
  Grade:
  Traceback (most recent call last):
    File "C:\Users\barry\Desktop\CP1850\Assignment #3 CP1850\question #4.py", 1
      avg = sum(score) / len(score)
  ZeroDivisionError: division by zero

>>> %Run 'question #4.py'

  Grade Point Average
  Grade:A+
  Grade:A-
  Grade:B+
  Grade:B
  Grade:B-
  Grade:C
  Grade:C+
  Grade:C-
  Grade:D+
  Grade:D
  Grade:F
  Grade:
  Average: 2.272727272727273
```

Question #5

```python
print("NO MORE PENNIES")

pen_per_nickel = 5
nickel = 0.05
total = 0
coin = input("Enter amount (blank to quit:")

while coin !="":
    total = total + float(coin)
    coin = input("Enter amount (blank to quit:")
print("The total amount is %.02f" % total)

rounding_pennie = total * 100 % pen_per_nickel

if rounding_pennie < pen_per_nickel /2:
    cash_total = total - rounding_pennie / 100

else:
    cash_total = total + nickel -rounding_pennie / 100

print("The total amount in cash is %.02f" % cash_total)
```

```
NO MORE PENNIES
Enter amount (blank to quit:100
Enter amount (blank to quit:20
Enter amount (blank to quit:3
Enter amount (blank to quit:
The total amount is 123.00
The total amount in cash is 123.00

>>> %Run 'question #5.py'

NO MORE PENNIES
Enter amount (blank to quit:15
Enter amount (blank to quit:42
Enter amount (blank to quit:
The total amount is 57.00
The total amount in cash is 57.00

>>> %Run 'question #5.py'

NO MORE PENNIES
Enter amount (blank to quit:2
Enter amount (blank to quit:
The total amount is 2.00
The total amount in cash is 2.00

>>> %Run 'question #5.py'

NO MORE PENNIES
Enter amount (blank to quit:3
Enter amount (blank to quit:
The total amount is 3.00
The total amount in cash is 3.00
```

Question #6

```python
for current_temp_celsius in range(10,101,10):
    fahrenheit_temp = ( 9 / 5) * current_temp_celsius + 32
    print(current_temp_celsius,"\t",fahrenheit_temp)
```

```
>>> %cd 'C:\Users\barry\Desktop\CP1850\Assignment #3 CP1850'
>>> %Run 'question #6.py'

10      50.0
20      68.0
30      86.0
40      104.0
50      122.0
60      140.0
70      158.0
80      176.0
90      194.0
100     212.0
```

Question #7

```python
print("PRINT A TRAINGLE")

size = int(input("How big would you like the traingle"))

for i in range(1,size+1):
    print(" "*(size-i)+"* "*i)
```

```
Python 3.7.4 (bundled)
>>> %Run 'question #7.py'

  PRINT A TRAINGLE
  How big would you like the traingle4
     *
    * *
   * * *
  * * * *

>>> %Run 'question #7.py'

  PRINT A TRAINGLE
  How big would you like the traingle8
        *
       * *
      * * *
     * * * *
    * * * * *
   * * * * * *
  * * * * * * *
 * * * * * * * *
```

Question #8

```python
print("Print All Prime Numbers")

Number = 1

while(Number <= 100):
    count = 0
    i = 2
    # Shows all numbers that are prime wi
    while(i <= Number//2):
        if(Number % i == 0):
            count = count + 1
            break
        i = i + 1

    if (count == 0 and Number != 1):
# User gets the prime factors
        print(" %d" %Number, end = '  ')
    Number = Number  + 1
```

Print All Prime Numbers
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79