Screen Capture #1

```python
1    #! /usr/bin/env python3
2
3    import math as m
4
5    num1 = int(input("Input a number: "))
6    num2 = int(input("Input another number: "))
7
8    print()
9
10   # The power function
11   print(str(num1) + " to the power of " + str(num2) + " is " + str(m.pow(num1, num2)))
12
13   # The square root function
14   print("The square root of " + str(num1) + " is " + str(m.sqrt(num1)))
15
16   # The ceiling function
17   print(
18       "The nearest integer (rounded up) to "
19       + str(num1 / num2)
20       + " is "
21       + str(m.ceil(num1 / num2))
22   )
23
24   # The floor function
25   print(
26       "The nearest integer (rounded down) to "
27       + str(num1 / num2)
28       + " is "
29       + str(m.floor(num1 / num2))
30   )
31
32   # Calculate the area of a circle using the pi function
33   print(
34       "The area of the circle with radius " + str(num1) + " is: " + str(m.pi * num1**2)
35   )
36
```

Screen Capture #2

```
zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/local/bin/python3.
Input a number: 25
Input another number: 3

25 to the power of 3 is 15625.0
The square root of 25 is 5.0
The nearest integer (rounded up) to 8.333333333333334 is 9
The nearest integer (rounded down) to 8.333333333333334 is 8
The area of the circle with radius 25 is: 1963.4954084936207
zmeyer@syn0095:~/Documents/projects/CIMP8A$ ▌
```

Screen Capture #3

```python
1    #! /usr/bin/env python3
2
3    number = 12345.6789
4
5    # Format number with 2 decimal places
6    print("{:.2f}".format(number))
7
8    # Format number with 4 decimal places
9    print("{:.4f}".format(number))
10
```

PROBLEMS   OUTPUT   TERMINAL   GITLENS   DEBUG CONS

zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/local
12345.68
12345.6789

Screen Capture #4

```python
1    #! /usr/bin/env python3
2
3    number = 12345
4
5    # Format number without comma
6    print("{:d}".format(number))
7
8    # Format number with comma
9    print("{:,d}".format(number))
10
```

PROBLEMS   OUTPUT   TERMINAL   GITLENS   DEBUG

zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/
12345
12,345

Screen Capture #5

```python
1    #! /usr/bin/env python3
2
3    number = .12345
4
5    # Format number without comma
6    print("{:.0%}".format(number))
7
8    # Format number with comma
9    print("{:.2%}".format(number))
10
```

PROBLEMS   OUTPUT   **TERMINAL**   GITLENS   DEBUG

zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/
12%
12.35%

Screen Capture #6

```python
1    #! /usr/bin/env python3
2
3    # Formatting with field widths
4    print("{:15} {:>5} {:>10}".format("Description", "Qty", "Price"))
5    print("{:15} {:>5d} {:>10.2f}".format("Hammer", 3, 9.99))
6    print("{:15} {:>5d} {:>10.2f}".format("Nails", 10, 14.5))
7
```

PROBLEMS   OUTPUT   **TERMINAL**   GITLENS   DEBUG CONSOLE

zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/local/bin/python3.9 "/Users
Description   Qty   Price
Hammer   3   9.99
Nails   10   14.50

Screen Capture #7

```python
1    #! /usr/bin/env python3
2
3    import locale as lc
4
5    # Set the locale
6    result = lc.setlocale(lc.LC_ALL, "")   # Windows
7    if result[0] == "C":
8        lc.setlocale(lc.LC_ALL, "en_US")   # Mac OS X
9
10   # Display currency
11   print(lc.currency(12345.67, grouping=True))
12
13   # Display integer
14   print(lc.format_string("%d", 12345, grouping=True))
15
16   # Display float
17   print(lc.format_string("%.2f", 12345.67, grouping=True))
18
```

PROBLEMS   OUTPUT   TERMINAL   GITLENS   DEBUG CONSOLE

```
zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/local/bin/python3.9 "/U
$12,345.67
12,345
12,345.67
zmeyer@syn0095:~/Documents/projects/CIMP8A$ ▮
```

Screen Capture #8

```python
1    #! /usr/bin/env python3
2
3    from decimal import Decimal
4
5    order_total = Decimal("100.05")
6    discount_percent = Decimal(".1")
7    discount = order_total * discount_percent
8
9    subtotal = order_total - discount
10   tax_percent = Decimal(".08")
11   sales_tax = subtotal * tax_percent
12   invoice_total = subtotal + sales_tax
13
14   print("Order Total:", str(order_total))
15   print("Discount:", str(discount))
16   print("Subtotal:", str(subtotal))
17   print("Sales Tax:", str(sales_tax))
18   print("Invoice Total:", str(invoice_total))
19
```

PROBLEMS   OUTPUT   **TERMINAL**   GITLENS   DEBUG CO

```
zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/loc
Order Total: 100.05
Discount: 10.005
Subtotal: 90.045
Sales Tax: 7.20360
Invoice Total: 97.24860
zmeyer@syn0095:~/Documents/projects/CIMP8A$
```

Screen Capture #9

```python
1    #! /usr/bin/env python3
2
3    from decimal import Decimal
4
5    order_total = Decimal("100.05")
6    discount_percent = Decimal(".1")
7    discount = order_total * discount_percent
8
9    subtotal = order_total - discount
10   tax_percent = Decimal(".08")
11   sales_tax = subtotal * tax_percent
12   invoice_total = subtotal + sales_tax
13
14   print("{:15} {:>10.2f}".format("Order Total:", order_total))
15   print("{:15} {:>10.2f}".format("Discount:", discount))
16   print("{:15} {:>10.2f}".format("Subtotal:", subtotal))
17   print("{:15} {:>10.2f}".format("Sales Tax:", sales_tax))
18   print("{:15} {:>10.2f}".format("Invoice Total:", invoice_total))
19
```

PROBLEMS   OUTPUT   TERMINAL   GITLENS   DEBUG CONSOLE

```
zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/local/bin/python3.9 "/User
Order Total:        100.05
Discount:            10.00
Subtotal:            90.04
Sales Tax:            7.20
Invoice Total:       97.25
```