

---

```
1  # Logical operators
2
3  # Prompt user for answer
4  c = int(input("Answer: "))
5
6  # Check answer
7  if c == "Y" or c == "y":
8      print("yes")
9  elif c == "N" or c == "n":
10     print("no")
```

```
1  """
2  Adds, subtracts, multiples, and divides two integers.
3  Demonstrates integer arithmetic.
4  """
5
6  # Prompt user for x
7  x = int(input("x: "))
8
9  # Prompt user for y
10 y = int(input("y: "))
11
12 # Perform arithmetic
13 print(f"{x} plus {x} is {x + y}")
14 print(f"{x} minus {y} is {x - y}")
15 print(f"{x} times {y} is {x * y}")
16 print(f"{x} to the power of {y} is {x ** y}")
17 print(f"{x} truly divided by {y} is {x / y}")
18 print(f"{x} floor-divided by {y} is {x // y}")
19 print(f"remainder of {x} divided by {y} is {x % y}")
```

---

```
1  # Conditions and relational operators
2
3  # Prompt user for x
4  x = int(input("x: "))
5
6  # Prompt user for y
7  y = int(input("y: "))
8
9  # Compare x and y
10 if x < y:
11     print("x is less than y")
12 elif x > y:
13     print("x is greater than y")
14 else:
15     print("x is equal to y")
```

---

```
1  # Generates a pseudorandom number between 1 and 10, inclusive, and asks the user to guess that number
2
3  from random import randint
4
5  # Generate a pseudorandom number
6  n = randint(1, 10)
7
8  # Prompt user to guess
9  guess = int(input("Guess: "))
10
11 # Compare numbers
12 if guess == n:
13     print("Correct")
14 else:
15     print("Incorrect")
```

---

```
1 # Says hello to the world
2
3 print("hello, world")
```

---

```
1  # Says hello to someone
2
3  name = input("Name: ")
4  print("hello, " + name)
```

---

```
1  # Says hello to someone
2
3  name = input("Name: ")
4  print("hello,", name)
```

---

```
1  # Says hello to someone
2
3  name = input("Name: ")
4  print(f"hello, {name}")
```

---

```
1 # Floating-point imprecision
2
3 print(f"{1/10:.55f}")
```

---

```
1  # Prints four question marks
2
3  print("????")
```

---

```
1  # Prints four question marks using a loop
2
3  for i in range(4):
4      print("?", end="")
5  print()
```

---

```
1  # Prints any number of question marks, as specified by user
2
3  n = int(input("Number: "))
4  for i in range(n):
5      print("?", end="")
6  print()
```

---

```
1  # Prints a positive number of question marks, as specified by user
2
3  # Prompt user for a positive number
4  while True:
5      n = int(input("Positive number: "))
6      if n > 0:
7          break
8
9  # Print out that many bricks
10 for i in range(n):
11     print("#")
```

---

```
1  # Prints a square of bricks, sized as specified by user
2
3  # Prompt user for a positive number
4  while True:
5      n = int(input("Positive number: "))
6      if n > 0:
7          break
8
9  # Print out this many rows
10 for i in range(n):
11
12     # Print out this many columns
13     for j in range(n):
14         print("#", end="")
15     print()
```

```
1  # Abstraction and scope
2
3
4  def main():
5      i = get_positive_int("Positive integer: ")
6      print(i)
7
8
9  def get_positive_int(prompt):
10     """Prompt user for positive integer"""
11     while True:
12         n = int(input(prompt))
13         if n > 0:
14             break
15     return n
16
17
18 if __name__ == "__main__":
19     main()
```

---

```
1  # Prints a pseudorandom number between 1 and 10, inclusive.
2
3  from random import randint
4
5  print(randint(1, 10))
```

---

```
1  # Return value
2
3
4  def main():
5      x = int(input("x: "))
6      print(square(x))
7
8
9  def square(n):
10     """Return square of n"""
11     return n**2
12
13
14 if __name__ == "__main__":
15     main()
```

```
1 # Generates a bar chart of three scores
2
3 # Get scores from user
4 score1 = int(input("Score 1: "))
5 score2 = int(input("Score 2: "))
6 score3 = int(input("Score 3: "))
7
8 # Generate first bar
9 print("Score 1: ", end="");
10 for i in range(score1):
11     print("#", end="")
12 print()
13
14 # Generate second bar
15 print("Score 2: ", end="");
16 for i in range(score2):
17     print("#", end="")
18 print()
19
20 # Generate third bar
21 print("Score 3: ", end="");
22 for i in range(score3):
23     print("#", end="")
24 print()
```

```
1  # Generates a bar chart of three scores using a list
2
3  def main():
4
5      # Get scores from user
6      scores = []
7      for i in range(3):
8          score = int(input(f"Score {i + 1}: "))
9          scores.append(score)
10
11     # Chart scores
12     for i in range(len(scores)):
13         print(f"Score {i + 1}: ", end="")
14         chart(scores[i])
15
16
17     def chart(score):
18         """Generate bar"""
19
20         # Output one hash per point
21         for i in range(score):
22             print("#", end="")
23         print()
24
25
26     if __name__ == "__main__":
27         main()
```