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**Assignment : 01 Operators**

**Part 1: Arithmetic Operators**

**a = 15**

**b = 4**

**print("Addition: a + b =", a + b)**

**print("Subtraction: a - b =", a - b)**

**print("Multiplication: a \* b =", a \* b)**

**print("Division: a / b =", a / b)**

**print("Floor Division: a // b =", a // b)**

**print("Modulus: a % b =", a % b)**

**print("Exponentiation: a \*\* b =", a \*\* b)**

**output:**

**A math equations and numbers

AI-generated content may be incorrect.**

**Q: What do you expect for floor division and modulus?**

**Ans: the expected value of floor division is 3 and modulus is 3.**

**Part 2: Arithmetic Assignment Operators**

**x = 10**

**print("Initial value of x:", x)**

**x += 5**

**print("After x += 5:", x)**

**x \*= 2**

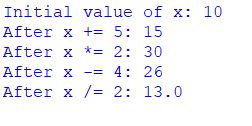
**print("After x \*= 2:", x)**

**x -= 4**

**print("After x -= 4:", x)**

**x /= 2**

**print("After x /= 2:", x)**

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**Q: What will be the final value of x?**

**Ans: final value of x is 13.0 .**

**Part 3: Comparison Operators**

**a = 7**

**b = 10**

**print("a == b:", a == b)**

**print("a != b:", a != b)**

**print("a > b:", a > b)**

**print("a < b:", a < b)**

**print("a >= b:", a >= b)**

**print("a <= b:", a <= b)**

**output:**

**A white background with blue text

AI-generated content may be incorrect.**

**Q: Which comparisons return True?**

**Ans: a != b,a < b, a <= b, are return true valus.**

**Part 4: Logical Operators**

**x = True**

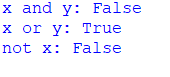
**y = False**

**print("x and y:", x and y)**

**print("x or y:", x or y)**

**print("not x:", not x)**

**output:**

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**Q: Predict the result before running each line?**

**Ans: false, true, false.**

**Part 5: Membership Operators**

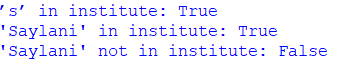
**institute = “Saylani Mass IT”**

**print("’s’ in institute:", "s" i*n* institute)**

**print("'Saylani' in institute:", "Mass" i*n* institute)**

**print("'Saylani' not in institute:", "Saylani" *not in* institute)**

**output:**

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**Part 6: Identity Operators**

**a = 5**

**b = 5**

**c = 1000**

**print("a is b:", a is b)**

**print("a is c:", a is c)**

**print("c is not b:", c is not b)**

**output:**

**A close-up of a white background

AI-generated content may be incorrect.**

**Bonus Challenge:**

**Write a mini program that:**

**- Take user name and password as input.**

**- You have to compare the user name with “Talha” and password with “Axiom123”.**

**- How can we write this comparison in Python (provide syntax)**

**A screen shot of a computer code

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**Output:**

**A close up of text

AI-generated content may be incorrect.**