1. **What is the result of the expression 3 + 5 * 2 - 8 / 4 ?
   - A) 10
   - B) 9
   - C) 11
   - D) 8
   - **Answer:** A) 10
   - **Explanation:** Multiplication and division are performed first: `5 * 2 = 10` and `8 / 4 = 2`. Then, addition and subtraction are performed: `3 + 10 - 2 = 11`.

2. **Which of the following operators has the highest precedence?
   - A) `+`
   - B) `*`
   - C) `>`
   - D) `&&`
   - **Answer:** B) `*`
   - **Explanation:** Among the options, multiplication (`*`) has the highest precedence.

3. **What is the associativity of the assignment operator `=` in C?
   - A) Left-to-right
   - B) Right-to-left
   - C) None
   - D) Undefined
   - **Answer:** B) Right-to-left
   - **Explanation:** The assignment operator (`=`) has right-to-left associativity.

4. **Evaluate the expression 6 / 2 * 3 + 4
   - A) 13
   - B) 10
   - C) 7
   - D) 15
   - **Answer:** A) 13
   - **Explanation:** Division and multiplication are performed first, from left to right: `6 / 2 = 3`, then `3 * 3 = 9`, and finally `9 + 4 = 13`.

5. **Which operator has higher precedence, `!` or `&&` ?
   - A) `!`
   - B) `&&`
   - C) Both have the same precedence
   - D) Depends on the context
   - **Answer:** A) `!`
   - **Explanation:** The logical NOT (`!`) operator has higher precedence than the logical AND (`&&`) operator.

6. **What is the result of the expression `10 - 4 * 2 / 2`?
   - A) 2

- B) 6
  - C) 8
  - D) 12
  - **Answer:** C) 8
  - **Explanation:** Multiplication and division are performed first: `4 * 2 = 8`, then `8 / 2 = 4`, and finally `10 - 4 = 6`.

7. **Which operator has lower precedence, `|` or `&&`?**
  - A) `|`
  - B) `&&`
  - C) Both have the same precedence
  - D) Depends on the context
  - **Answer:** A) `|`
  - **Explanation:** The bitwise OR (`|`) operator has lower precedence than the logical AND (`&&`) operator.

8. **What is the associativity of the ternary operator `?:` in C
  - A) Left-to-right
  - B) Right-to-left
  - C) None
  - D) Undefined
  - **Answer:** B) Right-to-left
  - **Explanation:** The ternary conditional operator (`?:`) has right-to-left associativity.

9. **Evaluate the expression 3 + 2 > 4 && 5 <= 10
  - A) 0
  - B) 1
  - C) 5
  - D) 10
  - **Answer:** B) 1
  - **Explanation:** The comparison operators are evaluated first, resulting in `1 && 1`, which gives `1`.

10. **Which of the following has the lowest precedence in C?**
  - A) `+`
  - B) `==`
  - C) `||`
  - D) `,` (comma)
  - **Answer:** D) `,`
  - **Explanation:** The comma operator has the lowest precedence in C.

11. **What is the result of 8 % 3 * 2 + 6 / 3
  - A) 4
  - B) 5
  - C) 6
  - D) 7
  - **Answer:** C) 6

- **Explanation:** The modulus and division operators are evaluated first: `8 % 3 = 2`, then `2 * 2 = 4`, and `6 / 3 = 2`. Finally, `4 + 2 = 6`.

12. **Which operator has higher precedence, `&&` or `||`**
  - A) `&&`
  - B) `||`
  - C) Both have the same precedence
  - D) Depends on the context
  - **Answer:** A) `&&`
  - **Explanation:** The logical AND (`&&`) operator has higher precedence than the logical OR (`||`) operator.

13. **Evaluate the expression 7 << 1 + 2**
  - A) 14
  - B) 21
  - C) 28
  - D) 56
  - **Answer:** C) 28
  - **Explanation:** The addition is performed first, resulting in `7 << 3`, which equals 28.

14. **Which operator has higher precedence, `*` or `%`**
  - A) `*`
  - B) `%`
  - C) Both have the same precedence
  - D) Depends on the context
  - **Answer:** C) Both have the same precedence
  - **Explanation:** Multiplication (`*`) and modulus (`%`) have the same precedence, and they are evaluated left to right.

15. **What is the result of 10 - 3 > 5 ? 4 : 2 + 1**
  - A) 4
  - B) 2
  - C) 3
  - D) 5
  - **Answer:** A) 4
  - **Explanation:** The condition `10 - 3 > 5` is true, so the expression evaluates to `4`.

16. **Evaluate the expression 5 & 3 | 7 ^ 2**
  - A) 2
  - B) 5
  - C) 7
  - D) 6
  - **Answer:** D) 6
  - **Explanation:** The bitwise AND, OR, and XOR operations are evaluated according to precedence, resulting in `6`.

18. **What is the result of the expression ~3 + 1**

- A) -4
- B) -2
- C) 0
- D) 1
- **Answer:** B) -2
- **Explanation:** The bitwise NOT operator (`~`) inverts the bits of 3, giving -4. Adding 1 results in -2.

19. **Which operator has the lowest precedence: `&&`, `||`, `==`, or `+`

- A) `&&`
- B) `||`
- C) `==`
- D) `+`
- **Answer:** B) `||`
- **Explanation:** Logical OR (`||`) has lower precedence than all the other operators listed.

20. **What is the result of the expression 5 * 2 < 10 == 0

- A) 0
- B) 1
- C) 10
- D) 5
- **Answer:** A) 0
- **Explanation:** The multiplication is performed first, resulting in `10 < 10`, which is false (`0`). Then `0 == 0` is true (`1`), and the entire expression evaluates to `0`.