**Expression:**

a + b && b / c % d \* e || 5 <= 0 != a + b – d

**Solution:**

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| 5 + 6 && 6 / 8 % 2 \* 1 || 5 <= 0 != 5 + 6 – 2 | (substitute values) |
| 5 + 6 && 0 % 2 \* 1 || 5 <=0 != 5 + 6 – 2 | (6 / 8 evaluated) |
| 5 + 6 && 0 \* 1 || 5 <= 0 != 5 + 6 – 2 | (0 % 2 evaluated) |
| 5 + 6 && 0 || 5 <= 0 != 5 + 6 – 2 | (0 \* 1 evaluated) |
| 11 && 0 || 5 <= 0 != 5 + 6 – 2 | (5 + 6 evaluated) |
| 11 && 0 || 5 <= 0 != 11 – 2 | (5 + 6 evaluated) |
| 11 && 0 || 5 <= 0 != 9 | (11 – 2 evaluated) |
| 11 && 0 || 0 != 9 | (5 <= 0 evaluated) |
| 11 && 0 || 1 | (0 != 9 evaluated) |
| 0 || 1 | (11 && 0 evaluated) |
| 1 | (0 || 1 evaluated) |

­­Let's understand through an example.

6\*2/ (2+1 \* 2/3 + 6) + 8 \* (8/4)

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| --- | --- |
| **Evaluation of expression** | **Description of each operation** |
| 6\*2/( 2+1 \* 2/3 +6) +8 \* (8/4) | An expression is given. |
| 6\*2/(2+2/3 + 6) + 8 \* (8/4) | 2 is multiplied by 1, giving value 2. |
| 6\*2/(2+0+6) + 8 \* (8/4) | 2 is divided by 3, giving value 0. |
| 6\*2/ 8+ 8 \* (8/4) | 2 is added to 6, giving value 8. |
| 6\*2/8 + 8 \* 2 | 8 is divided by 4, giving value 2. |
| 12/8 +8 \* 2 | 6 is multiplied by 2, giving value 12. |
| 1 + 8 \* 2 | 12 is divided by 8, giving value 1. |
| 1 + 16 | 8 is multiplied by 2, giving value 16. |
| 17 | 1 is added to 16, giving value 17. |

**Let's see some example of the logical expressions.**

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| **Logical Expressions** | **Description** |
| ( x > 4 ) && ( x < 6 ) | It is a test condition to check whether the x is greater than 4 and x is less than 6. The result of the condition is true only when both the conditions are true. |
| x > 10 || y <11 | It is a test condition used to check whether x is greater than 10 or y is less than 11. The result of the test condition is true if either of the conditions holds true value. |
| ! ( x > 10 ) && ( y = = 2 ) | It is a test condition used to check whether x is not greater than 10 and y is equal to 2. The result of the condition is true if both the conditions are true. |