

CSE 121 Section 2: Expressions Practice

Trace the evaluation of the following expressions, and give their resulting values. Make sure to answer with a value of the appropriate type (such as including a .0 at the end of a double or "" around Strings).

1. $4 * 3 / 8 + 2.5 * 8$

$12 / 8 + 2.5 * 8$

$1 + 20.0$

21.0

2. $26 \% 10 \% 4 * 3$

$6 \% 4 * 3$

$2 * 3$

6

3. $!(12 / 3 \leq 10.0 \% 2) \&\& 5.0 \% 2 == 1$

$!(4 \leq 0) \&\& 1.0 == 1$

$!(\text{false}) \&\& \text{true}$

$\text{true} \&\& \text{true}$

true

4. $41 \% 7 * 3 / 5 + 5 / 2 * 2.5$

$6 * 3 / 5 + 5 / 2 * 2.5$

$18 / 5 + 2 * 2.5$

$3 + 5.0$

8.0

5. $8 - 5.0 * 2 + ("2" + 5)$

$8 - 5.0 * 2 + ("25")$

$8 - 10.0 + ("25")$

$-2.0 + ("25")$

"-2.025"

6. $2 * 3 / 4 * 2 / 4.0 + 4.5 - 1$

$6 / 4 * 2 / 4.0 + 4.5 - 1$
 $1 * 2 / 4.0 + 4.5 - 1$
 $2 / 4.0 + 4.5 - 1$
 $0.5 + 4.5 - 1$

4.0

7. $(30 - 27) + 8 / 2 / 5 \% 3$

$3 + 8 / 2 / 5 \% 3$
 $3 + 4 / 5 \% 3$
 $3 + 0 \% 3$
 $3 + 0$

3

8. $(15 \% 5 == 3) \ || \ (! (5.0 - 4 == 1.0))$

$(0 == 3) \ || \ (! (1.0 == 1.0))$
 $false \ || \ !(true)$
 $false \ || \ false$

false

9. Trace the following expressions, and find their resulting values. Enter the output exactly as it would be printed to the console.

```
public static void main(String[] args) {  
    System.out.println(8.0 * 2 + 4 % 3 + "CSE 121" + 5.0);  
    System.out.println(12 / (5.0 - 1) + 3 % 2 + "g");  
    System.out.println(46 / 3 / 2.0 / 3 * 4 / 5);  
    System.out.println(42 % 78 != 100 / 7);  
    System.out.println(!(! (0 == 27 % 3) || (10 / 3 < 10)));  
}
```

What is the output of the above program?

17.0CSE 1215.0
4.0g
2.0
true
false