

**Question #1:**  $x = y/n + 4;$

**Answer:** 7.0

**Why:** Implicit Type Casting happens after evaluation

**Question #2:**  $x *= 3;$

**Answer:** 60.0

**Why:**  $x * 3 = 60.0$

**Question #3:**  $x = \text{REAL} * y / n;$

**Answer:** 3.5

**Why:** x and REAL are both doubles, data type casting

**Question #4:**  $y = 2 / t;$

**Answer:** Invalid

**Why:** Explicit Type Casting A data type of higher size cannot be assigned to a data type of smaller size

**Question #5:**  $x = (\text{double}) 5/2;$

**Answer:** 2.5

**Why:** Order of operations:

- Doubles 5 = 5.0
- $5.0 / 2 = 2.5$

**Question #6:**  $x = (\text{double}) (5/2);$

**Answer:** 2.0

**Why:** Order of operations:

- $5 / 2 = 2$  (INTS)
- Doubles 2 = 2.0

**Question #7:**  $x = y \% 3 + \text{MIN} / t + \text{MAX};$

**Answer:** 6.5

**Why:** Order of operations:

- $y \% 3 = 1$
- $\text{MIN} / t = .5$
- $\text{MAX} = 5$

**Question #8:**  $x = 3 - 4 * x;$

**Answer:** -77.0

**Why:** Order of operations:

- $4 * x = 80$
- $3 - 80 = -77$

**Question #9:**  $z = \text{MAX} / \text{MIN};$

**Answer:** 2.5

**Why:** Implicit Casting, type conversion happens during since MIN is a double.

**Question #10:**  $z = 2 / 4 * z;$

**Answer:** 0.0

**Why:** Order of operations:

- $2 / 4 = 0$  (int)
- $0 * z = 0.0$  (type conversion)

**Question #11:**  $\text{MIN} = \text{MAX} + z / 3;$

**Answer:** Invalid

**Why:** MIN is a final variable - it cannot be changed

**Question #12:**  $y = -10 / 2 \% 4;$

**Answer:** -1

**Why:** Order of operations:

- $-10 / 2 = -5$
- $-5 \% 4 = -1$

**Question #13:**  $x++;$

**Answer:** 21.0

**Why:** Increments x as a double

**Question #14:**  $--y;$

**Answer:** 6

**Why:**  $y--$  and  $--y$  are interchangeable; however,  $--y$  decrements the value before evaluation, and  $y--$  decrements after evaluation