

Students: Section 2.11 is part of 2 assignments: CSC108 CH02.11-2.24 C2B ✓ Includes: CA Due: 02/06/2025, 11:59 PM EST
This assignment's due date has passed. Activity will still be recorded, but will not count towards this assignment (unless the due date is changed). See this article for more info.

2.11 Integer division and modulo

Division: Integer rounding

When the operands of / are integers, the operator performs integer division, which does not generate any fraction.

PARTICIPATION ACTIVITY 2.11.1: Integer division does not generate any fraction.

Start 2x speed

y = 10 / 4; y = 3 / 4; a = (1 / 2) * b * h f = c * (9/5) + 32 int w = 10; int w = 10; double x = -4.0;
2.5 0.75 0 ... 1 int w = 10; int w = 10;
2 0 0 ... 1 y = w / x;
Always 0 Always c*f + 32 y = w / x;
2.5

Captions ^

- If both operands of / are integers, the operator performs integer division. No fractional part is generated. Thus $10 / 4$ is 2, not 2.5. And $3 / 4$ is 0, not 0.75.
- Programmers may forget, causing strange logic errors. $(1/2) * b * h$ is always $(0) * b * h$ or 0. And $c * (9/5) + 32$ is always $c * (1) + 32$.
- The same applies for integer variables. No fraction is generated for $y = w / x$ if w and x are int type, even if y is a floating-point type.
- If at least one operand of / is a floating-point type, then floating-point division occurs. So if int w = 10 and double x = 4.0, then w / x is 2.5.

Feedback?

The / operator performs floating-point division if at least one operand is a floating-point type.

PARTICIPATION ACTIVITY 2.11.2: Division.

Determine the result. Some expressions only use literals to focus attention on the operator, but most practical expressions include variables.

1) $13 / 3$

2) $4 / 9$

3) $(5 + 10 + 15) * (1 / 3)$

4) x / y where int x = 10 and int y = 4.

5) $10 / 4.0$

6) x / y where int x = 10 and double y = 4.0.

Check Show answer

Check Show answer