

Homework §1.1 – ML Expressions and Operators

In Exercises 1-6, write the exact response of ML to the following expressions.

1. `1+2*3;`
2. `5.0-4.2/1.4;`
3. `11 div 2 mod 3;`
4. `"arc"^"sine"^"";`
5. `3>4 orelse 5<6 andalso not (7<>8);`
6. `if 6<10 then 6.0 else 10.0;`

In Exercises 7-12, the given ML “expressions” have errors. Explain the error in each.

7. `8/4;`
8. `if 1<3 then 4;`
9. `1<2 and 5>3;`
10. `6+7 DIV 2;`
11. `4.+3.5;`
12. `1.0<2.0 or 3>4;`

In Exercises 13-20, write ML expressions to do the given task.

13. Convert 123.45 to the next lower integer.
14. Convert -123.45 to the next lower integer.
15. Convert 123.45 to the next higher integer.
16. Convert -123.45 to the next higher integer.
17. Convert #“Y” to an integer.
18. Convert 120 to a character.
19. Convert #“Z” to a string.
20. Convert #“N” to a real.

In Exercises 21-28, the given ML “expressions” have errors. Explain the error in each.

21. `ceil(4);`
22. `if true then 5+6 else 7.0;`
23. `chr(256);`
24. `chr(~1);`
25. `ord(3);`
26. `chr(#“a”);`
27. `if 0 then 1 else 2;`
28. `ord(“a”);`