

## Sequences on the Real Line Exercises

Exercise numbers refer to Simon and Blume or Ross. You may find exercises marked with an asterisk harder.

1. Exercise 12.1 S&B.
2. Exercise 12.2 of S&B.
3. Exercises 7.1-7.5 of Ross.
4. Exercise 12.3. of S&B. (You will need to consider cases based on the signs of  $x$  and  $y$ .)
5. Exercise 8.1 of Ross.
6. Exercise 8.2 of Ross.
7. Exercise 8.7 of Ross.
8. Exercise 9.6\* of S&B.
9. Exercises 9.1-9.8 of Ross.
10. Exercise 9.17 of Ross.
11. Exercise 9.18 of Ross.
12. Exercise 10.1 of Ross.
13. Exercise 10.2\* of Ross.
14. Exercise 10.4 of Ross.
15. Exercise 10.5 of Ross.
16. Exercises 10.9-10.11\* of Ross.
17. Exercise 11.1 of Ross.
18. Exercises 11.2-11.4 (a), (b), (d) and (e) of Ross. (A subsequential limit of a sequence  $(s_n)$  is some real number,  $+\infty$  or  $-\infty$  that is the limit of some subsequence of  $(s_n)$ .)