

Additional information regarding the programming assignments will be given in class. To receive full credit on homework:

- Clearly label each homework with **your name**, the **textbook section number** or **title of worksheet**, number each problem, and present in the order assigned.
- *Show your work* and *provide justifications* for your answers. Simply copying solutions from the back of the book is insufficient for credit.
- Turn in by due date.

| Section | Due       | Problems   |
|---------|-----------|--|
| 1.1     | F – 8/26  | 1a-d, 3, 5a-e, 7e-g, 11, 13, 19, 23, 27a-d, 31a-d, 33ab, 37ab, 49, 51  |
| 1.2     | M – 8/29  | 5, 7, 9adf, 11adf, 17, 23, 25, 29, 55  |
| 1.3     | W – 8/31  | 1, 7, 11, 15, 17a-d, 33, 37ab, 39abc, 51, 59   |
| 1.4     | F – 9/2   | 3a-d, 5a-e, 9a-g, 15a-d, 19a, 25ab, 27a-d, 29cd, 31ab, 33abc, 39   |
| 1.5     | W – 9/7   | 3, 5, 9a-d, 13, 15, 17, 19, 23, 27, 31   |
|         | F – 9/9   | Worksheet 1: combinations, hierarchy, equivalent expression  |
| 1.6     | M – 9/12  | 1, 3, 5, 7, 9, 11, 15, 17, 21, 23, 27, 29  |
| 1.7     | W – 9/14  | 3, 14, 17, 27, 36  |
|         | W – 9/14  | Worksheet 2: Proofs, Part 1  |
|         | F – 9/16  | Worksheet 3: Proofs, Part 2  |
| n/a     | TBA       | Programming Assignment #1: execution times and report; $\log n$ , $n$ , $n \log n$ , $n^2$ , $n^3$ , $n^4$ , $2^n$ |
| 2.1     | M – 9/19  | 5, 7, 9, 13, 16, 18, 19c, 22, 24, 31   |
| 2.2     | W – 9/21  | 1, 3, 7, 13, 16abc, 27, 32, 47, 48a, 53  |
| 2.3     | W – 9/21  | 1, 9a-f, 11, 12, 17, 19abc, 28, 47   |
| 2.4     | F – 9/23  | 1, 4, 7, 9abc, 13, 17, 29, 30, 31cd, 37(Proof)   |
| 3.1     | M – 9/26  | 2ad, 7, 9, 12, 13, 14, 18  |
| 3.2     | W – 9/28  | 2abc, 3, 7a, 9, 14abc, 18, 24ab, 29  |
|         | F – 9/30  | Worksheet 4: Comparison of Running Times   |
|         | F – 9/30  | Worksheet 5: Comparison of Function Growth Rates   |
| 3.3     | M – 10/3  | 2, 4 (justify), 7, 8   |
| 3.4     | W – 10/5  | 4, 8, 9a-d, 12, 26, 35   |
| 3.5     | F – 10/7  | 4a-d, 5, 10, 13, 18, 21a-c, 26   |
| 3.6     | M – 10/10 | 1, 3a-c, 5a-c, 7, 9, 23a-d, 39   |
| 3.7     | W – 10/12 | 1  |

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|------|-----------|--|
| 4.1  | W – 10/12 | Rewrite as summations, then prove by induction: 5, 7, 9, 11, 14, 20  |
| 4.2  | M – 10/17 | 3, 4, 12   |
|      | M – 10/17 | Worksheet 6: Induction Proofs, Part 1  |
|      | W – 10/19 | Worksheet 7: Induction Proofs, Part 2  |
|      | F – 10/21 | Worksheet 8: Induction Proofs, Part 3  |
| 4.3  | M – 10/24 | 1, 3ab, 8abc, 24ab, 39   |
| 4.4  | W – 10/26 | 8, 11, 24, 28  |
| 4.5  | F – 10/28 | 2, 4, 7, 12  |
| Ch 4 | M – 10/31 | Supplement: 2, 4, 6, 8, 32   |
| n/a  | TBA       | Programming Assignment #2: p310: investigating Ackermann's Function; find answers for 4.3.48; include report                           |
| n/a  | TBA       | Programming Assignment #3: recursive and non-recursive Fibonacci Functions and report — implementing algorithms 7 and 8 in section 4.4 |
| 7.1  | F – 11/4  | 1a-c, 4, 6a-c, 9a-c, 14, 37a, 40   |
| 7.2  | M – 11/7  | 2a-e, 4a-c, 9, 13, 15, 21, 23, 29  |
| 7.2  | W – 11/9  | 12, 14, 22, 24, 28, 30   |
| 7.3  | W – 11/9  | 2, 8a-c, 14, 16, 34, 36  |
| n/a  | TBA       | Programming Assignment #4: Warshall Algorithm  |
| 11.1 | F – 11/11 | 1, 3, 5a-c, 9, 16, 18, 21  |
| 11.2 | M – 11/14 | 3a-c, 5, 7, 9  |
| 11.3 | W – 11/16 | 1, 3, 6a-c, 8  |
| 11.4 | F – 11/18 | 2, 4, 6a-b, 7a-b, 12a-b  |
| n/a  | TBA       | Programming Assignment #5:   |
| 12.1 | M – 11/28 | 2, 4a-c, 6, 8a, 12a-b, 14, 18  |
| 12.2 | W – 11/30 | 2, 4, 6, 8, 14   |
| 12.3 | F – 12/2  | 10, 12, 14, 16, 18, 20, 27   |
| 12.4 | W – 12/5  | 2, 4, 6, 10  |
| 12.5 | F – 12/7  | 2, 4, 6  |