

MATH/CS 307: Discrete Mathematics  
Spring 2016  
Problem List

| Section | Problems   | Due Date      |
|---------|--|---------------|
| 1.1     | # 1,4,7,10,13,16,20,24,28,32,36,37,47,53,57,64,68,76,77,80,83,87   | Friday 22 Jan |
| 1.2     | #1,7,10,12*,15*,16,19,22,25,28,33,36,39,40,42,44,45,55-59,66,67,74<br>*Give a proper negation of the proposition. That is, do not use some version of “It is not the case that...”   | Friday 29 Jan |
| 1.3     | #1,3-8,11,12,13,16,19,21,24,27,30,31,34,43,44-49,52,53,59,68*,70,73<br><br><u>Problem A:</u> <b>SHOW</b> whether or not the propositions $P = p \wedge (q \vee r)$ and $Q = (p \wedge q) \vee (p \wedge r)$ are logically equivalent.<br><br>* For # 68, use the directions from Problem A. That is, it is <i>not sufficient</i> to simply <i>state</i> whether the two propositions are equivalent. You must give a sound explanation of your conclusion. | Friday 29 Jan |
| 1.4     | # 1-5, 6,9,11-15,18,21,24  | Friday 29 Jan |
| 1.5     | # 12-20,21,24,27,28,31,34,35,38,41,43,44,47,48,49-54,55*<br>*Only negate symbolically.<br>#’s 57-66 are amusing, but not required.   | Friday 5 Feb  |
| 1.6     | #37-60,64-66*<br>*You don’t have to use the Logic Game to make your argument.  | Friday 5 Feb  |
| 2.1     | #7,10,13,19,22,25,31,33,37   | Friday 12 Feb |
| 2.2     | #3,4,6,19,22,30,41   | Friday 12 Feb |
| 2.4     | #1-7,12,14,21,27   | Friday 12 Feb |
| 2.5     | #1,2,6-10, 14, 16,19   | Monday 15 Feb |

split between Test 1 and Test 2

|     |  |               |
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| 3.1 | #1,4,6,9,10,13,23,26,32,35,41,48,51,62,70                    | Friday 26 Feb |
| 3.2 | #4,6,8,10,12,17,19,39-50,51,59,67-73,83-86,91-94,117,120,129 | Friday 26 Feb |
| 3.3 | #13,18-30,37,40,42,48  | Friday 4 Mar  |
| 3.4 | #4-8,9,12,18,21-23,25,26,31,32,35,38                         | Friday 4 Mar  |
| 3.2 | (supplementary problems) #76,82,102,110                      | Friday 4 Mar  |
| 3.5 | # 1,4,8,11,14,16,19  | Friday 4 Mar  |
| 4.3 | #1-26,28,32-34,42-50,53                                      | Friday 11 Mar |
| 5.1 | #4,7,12,15,17,18,23,25(applied to 12,15,17,18,23),29,31      | Wed 23 Mar    |
| 5.2 | #4,7,9,16,25,30,32(applied to 25),39,41,45                   | Friday 25 Mar |
| 5.3 | #4,7,10,11(applied to 4,7,10),12,15,23,36,39                 | Friday 25 Mar |

split between Test 2 and Test 3

|     |   |                 |
|-----|---|-----------------|
| 6.1 | #20-27,38-51,70,71,86-91  | Wednesday 6 Apr |
| 6.2 | #10-18,30,40,41,43,46,60-64   | Wednesday 6 Apr |
| 6.3 | #1,4,5,10,15,18,19,21,22,23,39,42,44,45                                       | Fri 15 Apr      |
| 6.4 | #1-6,9*,12*,13*<br>*This just means to list the object in lexicographic order | Fri 15 Apr      |
| 6.7 | #3,6,9,10,15,22   | Fri 15 Apr      |
| 6.8 | #1-12   | Wed 20 Apr      |
| 7.1 | #   |                 |
| 7.2 | #   |                 |