

CSCE 222 (Carlisle), Discrete Structures for Computing  
Spring 2020  
Homework 1

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Type your name below the pledge to sign  
On my honor, as an Aggie, I have neither given nor received unauthorized aid on  
this academic work.  
\*\*YOUR NAME HERE\*\*

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**Instructions:**

- The exercises are from the textbook. You are encouraged to work extra problems to aid in your learning; remember, the solutions to the odd-numbered problems are in the back of the book.
  - Each exercise is worth 1 point.
  - Grading will be based on correctness, clarity, and whether your solution is of the appropriate length.
  - Always justify your answers.
  - Don't forget to acknowledge all sources of assistance in the section below, and write up your solutions on your own.
  - *Turn in .pdf file to Gradescope by the start of class on Tuesday, January 21, 2020.* It is simpler to put each problem on its own page using the LaTeX clearpage command.
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**Help Received:**

- List any help received here, or "NONE".
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**LaTeX hints:** Read this .tex file for some explanations that are in the comments.

Math formulas are enclosed in \$ signs, e.g.,  $x + y = z$  becomes  $x + y = z$ .

Logical operators:  $\neg$ ,  $\wedge$ ,  $\vee$ ,  $\oplus$ ,  $\rightarrow$ ,  $\leftrightarrow$ .

Here is a truth table using the “tabular” environment:

$p$	$\neg p$
T	F
F	T

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### Exercises for Section 1.1:

**8(e):** \*\* YOUR ANSWER GOES HERE \*\*

**12(h):** \*\* YOUR ANSWER GOES HERE \*\*

**34(f):** \*\* YOUR ANSWER GOES HERE \*\*

**46(a,c,e): (1 pt each)** \*\* YOUR ANSWER GOES HERE \*\*

### Exercises for Section 1.2:

**10:** \*\* YOUR ANSWER GOES HERE \*\*

**18(c):** \*\* YOUR ANSWER GOES HERE \*\*

**38:** \*\* YOUR ANSWER GOES HERE \*\*

**44(a):** \*\* YOUR ANSWER GOES HERE \*\*

### Exercises for Section 1.3:

**8(c)** \*\* YOUR ANSWER GOES HERE \*\*

**10(c)** \*\* YOUR ANSWER GOES HERE \*\*

**20** \*\* YOUR ANSWER GOES HERE \*\*

### **Exercises for Section 1.4:**

**10(e):** \*\* YOUR ANSWER GOES HERE \*\*

**12(g):** \*\* YOUR ANSWER GOES HERE \*\*

**42(b):** \*\* YOUR ANSWER GOES HERE \*\*

**46:** \*\* YOUR ANSWER GOES HERE \*\*

### **Exercises for Section 1.5:**

**16(e):** \*\* YOUR ANSWER GOES HERE \*\*

**32(d):** \*\* YOUR ANSWER GOES HERE \*\*

**44:** \*\* YOUR ANSWER GOES HERE \*\*