

Due February 3

Name

Remember, you are not to discuss these problems with anyone with three exceptions: (1) discussions with me are allowed, (2) you may use any information that comes to light during a Wednesday Brainstorming session and (3) if the directions to the problem specifies you may work with others.

“No, no, you’re not thinking, you’re just being logical.” -Niels Bohr, physicist (1885-1962)

Problems from Chapter 1 of Greenberg

1. Give a careful definition of one of the geometric terms or phrases from each of exercises 1, 2, and 3.
2. Do the construction problems from exercises 14-15, and 2 (pages 46-47) assigned below. You will need to provide justifications for each of your constructive steps. For this assignment you may use any results from Euclidean geometry to justify the steps of your constructions. (In future assignments you will not be able to assume you are in Euclidean geometry.)

Elizabeth	KC	Eric	Gib	Karly	Betsy	Matt	Garrett	Mike	Spencer	Tiffany
14f	14c	14d	14e	14f	14g	15a	15b	14c	14d	14e

3. Develop a truth table for the logical statement (below) assigned to you in class. Give a brief verbal explanation of what the logical statement means.

- (a) $(p \vee q) \iff (\sim p) \wedge (\sim q)$
- (b) $(p \implies q) \iff (\sim q) \implies (\sim p)$ contrapositive
- (c) $(p \implies q) \iff (\sim p) \vee q$
- (d) $\sim [H \implies C] \iff H \wedge \sim C$
- (e) $(P \wedge (P \implies Q)) \implies Q$
- (f) $((P \wedge \sim Q) \implies (R \wedge \sim R)) \implies (P \implies Q)$

Elizabeth	KC	Eric	Gib	Karly	Betsy	Matt	Garrett	Mike	Spencer	Tiffany
c	b	f	e	d	c	b	a	f	e	d