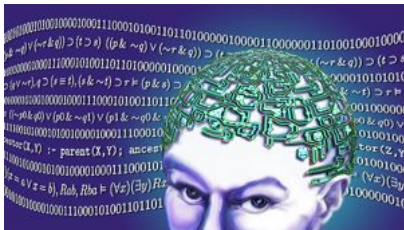


Logic: Language and Information 1

§0 Welcome

Jen Davoren and Greg Restall



Welcome to Logic: Language and Information 1

Five Weeks of Logic and its Applications!

Week 1: Language and Models of Propositional Logic

If it's raining *and* I don't have
my umbrella, *then* I'll get wet
unless I'm lucky.

Week 1: Language and Models of Propositional Logic

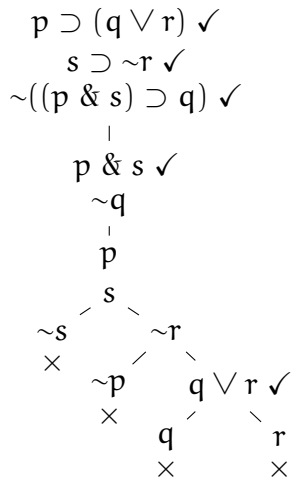
If it's raining *and* I don't have
my umbrella, *then* I'll get wet
unless I'm lucky.

$$(r \ \& \ \sim u) \supset (w \vee l)$$

Week 1: Language and Models of Propositional Logic

p	q	p	&	~	q	~	(~	p	∨	q)
0	0	0	0	1	0	0	1	0	1	0
0	1	0	0	0	1	0	1	0	1	1
1	0	1	1	1	0	1	0	1	0	0
1	1	1	0	0	1	0	0	1	1	1

Week 2: Proof Trees for Propositional Logic



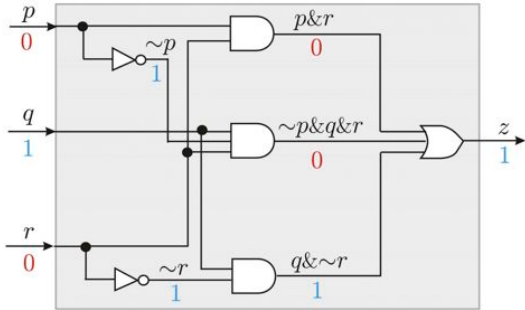
Weeks 3 to 5: Applications

- ▶ Electronic Engineering
- ▶ Philosophy
- ▶ Linguistics
- ▶ Computer Science

Weeks 3 to 5: Applications

- ▶ Electronic Engineering
 - ▶ Philosophy
 - ▶ Linguistics
 - ▶ Computer Science
- *Choose two*

Application: Electronic Engineering—Combinational Digital Systems



Answer: $z \equiv (p \& r) \vee (\sim p \& q \& r) \vee (q \& \sim r)$

Application: Philosophy—Vagueness



Application: Linguistics—Implicature and Implication



Q: Do you
have any
children?

A: I have a
son.

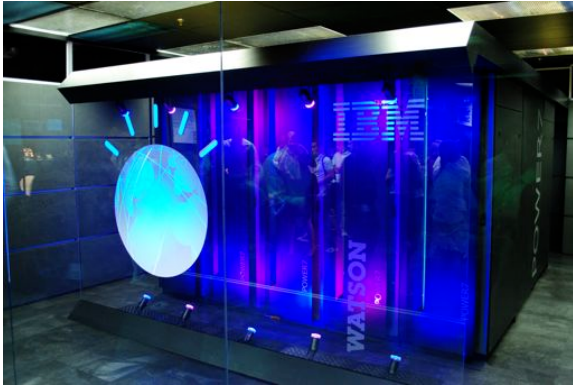
Application: Linguistics—Implicature and Implication



Q: Do you
have any
children?

A: I have a
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Application: Computer Science—Propositional PROLOG



How we'll do this

- ▶ Videos, most with quizzes
- ▶ Course Notes
- ▶ Discussion Board
- ▶ Practice Quizzes
- ▶ Graded Quizzes
- ▶ Peer Assessment

Grading

TASK	POINTS	%
CORE S1	20	20 %
CORE S2	20	20 %
APP. S3	20	<i>Best two, plus half of the rest.</i>
APP. S4	20	
APP. S5	20	
APP. S6	20	40 %
FINAL	20	20 %
TOTAL		100 %

We hope you enjoy this introduction to Logic!

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