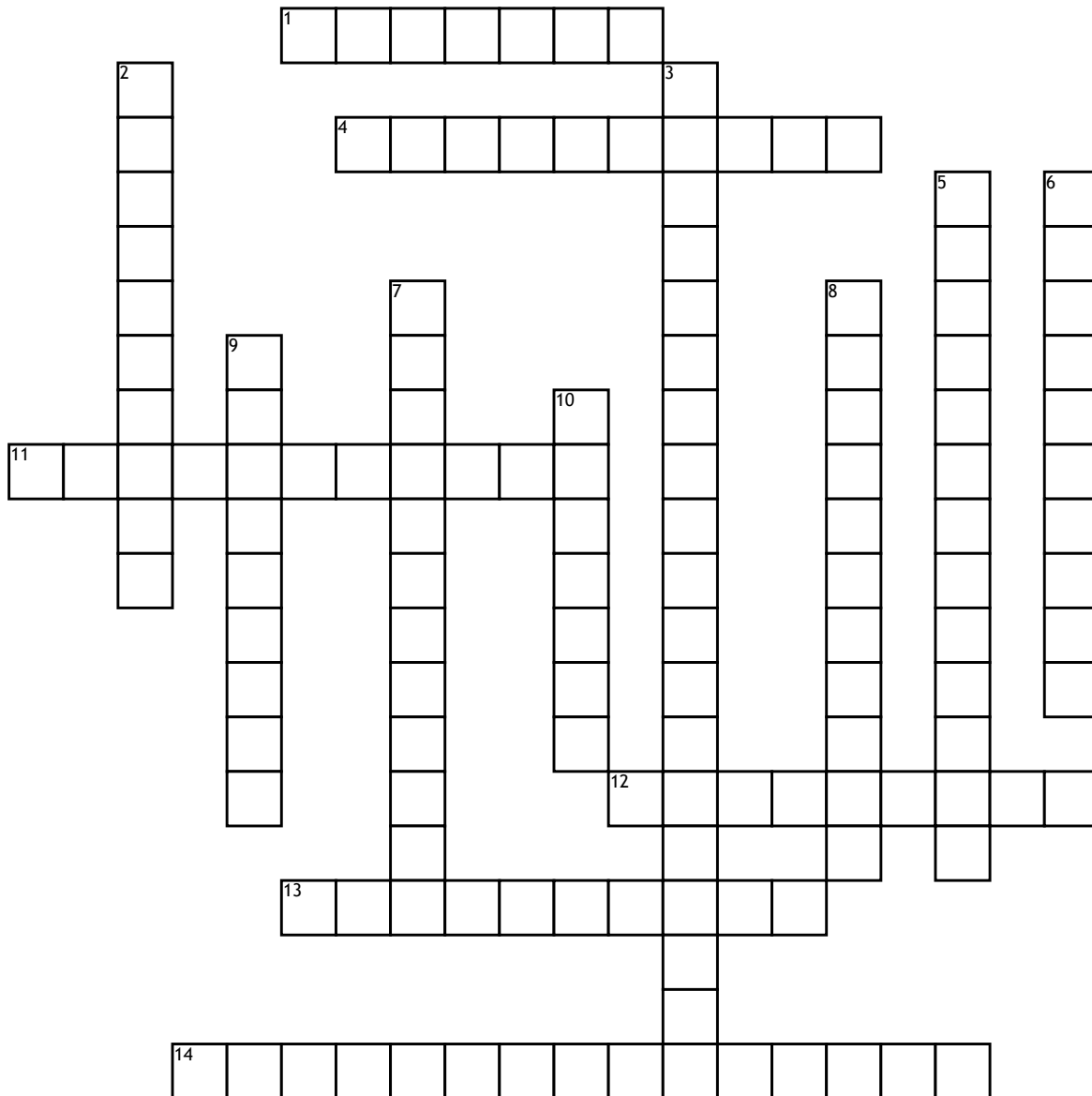


# Intermediate Logic



## Across

1. A valid argument which presents a choice between two conditionals.  
 4. Is a path on a truth tree which includes no contradictions.  
 11. A logical operator that joins two propositions and is true if and only if one or both of the propositions is true.  
 12. Which rule of replacement says  $p \equiv (p \vee p)$ ?  
 13. For two propositions to be true at the same time they are said to be?

14. A valid argument form which can be used to justify steps in a proof.

## Down

2. When a compound proposition is broken down into simple propositions. It is said to be what?  
 3. Which rule of replacement says  $(p \equiv q) \equiv [(p \cdot q) \vee (\sim p \cdot \sim q)]$ ?  
 5. Which rule of replacement says  $(p \supset q) \equiv (\sim q \supset \sim p)$ ?  
 6. The proposition following the if is called?

7. Which rule of replacement says  $[p \cdot (q \vee r)] \equiv [(p \cdot q) \vee (p \cdot r)]$ ?

8. Which rule of replacement says  $[(p \cdot q) \supset r] \equiv [p \supset (q \supset r)]$ ?  
 9. A proposition that is always true due to its logical structure.  
 10. If the premises can be true and the conclusion false, the argument is?