Test the validity of the following argument forms using the tree method.

1. \( p \supset q, r \lor \lnot q; \) therefore \( (p \lor q) \supset r \)
2. \( (p \land q) \supset r; \) therefore \( p \supset r \)
3. \( p \supset q, q \supset r; \) therefore \( p \supset r \)
4. \( (p \supset r) \lor (q \supset r); \) therefore \( (p \land q) \supset r \)
5. \( (p \supset q) \lor (r \supset q); \) therefore \( (p \lor r) \supset q \)
6. \( p \supset (q \equiv r), q \supset (p \equiv r); \) therefore \( r \supset (p \equiv q) \)
7. \( (p \lor q) \equiv (r \land s), q \equiv (r \supset p); \) therefore \( r \supset (p \lor q) \)
8. \( \lnot (p \land r), r \lor q; \) therefore \( (p \lor r) \supset q \)
9. \( (p \land q) \supset r; \) therefore \( (p \supset r) \lor (q \supset r) \)
10. \( p \lor q, \lnot q \lor r; \) therefore \( p \lor r \)
11. \( p \supset (q \supset r); \) therefore \( q \supset (p \supset r) \)
12. \( p \supset (q \supset r); \) therefore \( (p \supset q) \supset r \)

After identifying the propositional argument form of the following arguments test their validity using the tree method.

1. If Leverkuhn is gifted and makes a deal with the devil, then he becomes a genius. Therefore, Leverkuhn doesn’t become a genius only if he isn’t gifted or doesn’t make a deal with the devil.
2. Jim doesn’t open his own bar unless he studies business and his father helps him. Jim doesn’t study business if he studies philosophy. Therefore if Jim studies philosophy or his father doesn’t help him, he doesn’t open his own bar.
3. Tonio suffers if Hans doesn’t love him, but Tonio won’t become a writer unless he suffers. Therefore, Tonio becomes a writer if and only if Hans doesn’t love him.
4. Old Jolyon doesn’t die happily unless he goes to the opera and has dinner with Irene. He doesn’t have dinner with Irene if and only if he doesn’t go the opera. Therefore, if Old Jolyon has dinner with Irene, he dies happily.
5. ‘If a moral theory is studied empirically then examples of conduct will be considered. And if examples of conduct are considered, principles for selecting examples will be used. But if principles for selecting examples are used, then moral theory is not being studied empirically. Therefore, moral theory is not studied empirically.’ (Immanuel Kant)