

3.38.1. Indirect Deduction Problems

A. For the following indirect deduction, supply a **justification** for each line (to the right of that line).

1. $(P \vee Q)$
 2. $(\sim P \vee Q)$
 - 3. $\sim Q$
 - 4. P
 - 5. $\sim P$
 6. Q
- Get: Q (ID)

B. The following argument is clearly **invalid**.

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|---|-------------------------------------|
| <u>1. Neko is a cat and Jack is a cat.</u> | <u>1. $(P \wedge Q)$</u> |
| \therefore Neko is a cat but she's not a cat. | $\therefore (P \wedge \sim P)$ |

But the following deduction seems to deduce the conclusion of this argument from its premise. **Explain what mistake has been made in this deduction.**

1. $(P \wedge Q)$
 - 2. $\sim P$
 - 3. P
 4. P
 5. $(P \wedge \sim P)$
- Get: P (ID)
AID
1, \wedge^-
2, 3, ID
2, 4, \wedge^+