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## 1 exercise9 Theory

**Built:** 22 March 2020

**Parent Theories:** indexedLists, patternMatches

### 1.1 Theorems

[absorptionRule]

$$\vdash \forall p \ q. \ (p \Rightarrow q) \Rightarrow p \Rightarrow p \wedge q$$

[absorptionRule2]

$$\vdash \forall p \ q. \ (p \Rightarrow q) \Rightarrow p \Rightarrow p \wedge q$$

[constructiveDilemmaRule]

$$\vdash \forall p \ q \ r \ s. \ (p \Rightarrow q) \wedge (r \Rightarrow s) \Rightarrow p \vee r \Rightarrow q \vee s$$

[constructiveDilemmaRule2]

$$\vdash \forall p \ q \ r \ s. \ (p \Rightarrow q) \wedge (r \Rightarrow s) \Rightarrow p \Rightarrow p \wedge q$$

## 2 exercise10 Theory

**Built:** 22 March 2020

**Parent Theories:** indexedLists, patternMatches

### 2.1 Theorems

[problem1\_thm]

$$\vdash M \ s$$

[problem2\_thm]

$$\vdash p \Rightarrow \neg q$$

[problem3\_thm]

$$\vdash r \vee s$$



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