**TUGAS PERSONAL 1**

**Minggu ke 2, Sesi ke 3**

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Mata Kuliah : **Matematika Diskrit**

1. A. Logika Ekivalen

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *p* | *q* | *r* | *p→(q→r)* | *(p^q) →r* |
| T | T | F | T→F = F | T→F = F |
| T | F | F | T→T = T | F→F = T |
| F | T | T | F→T = T | F→T = T |
| F | F | T | F→T = T | F→T = T |

B. Validitas Argumen

Dengan table kebenaran

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *p* | *q* | *r* | *p v q* | *p→r* | *~r* | *~r→q* | *|p v q | p -> r | ~r | ... q* |
| T | T | T | T | T | F | T | T ^ T ^ F ^ T→ T = T |
| T | T | F | T | F | T | T | T ^ F ^ T ^ T→ F = T |
| T | F | T | T | T | F | T | T ^ T ^ F ^ T→ T = T |
| T | F | F | T | F | T | F | T ^ F ^ T ^ F→ F = T |
| F | T | T | T | T | F | T | T ^ T ^ F ^ T→ T = T |
| F | T | F | T | T | T | T | T ^ T ^ T ^ T→ F = F |
| F | F | T | F | T | F | T | F ^ T ^ F ^ T→ T = T |
| F | F | F | F | T | T | F | F ^ T ^ T ^ F→ F = T |

Dengan Aturan Inferensi

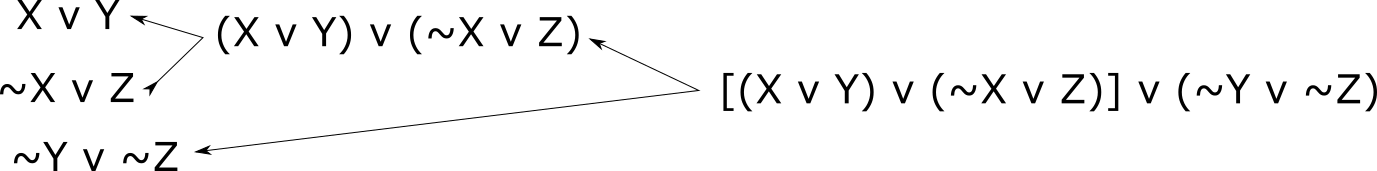
*p v q*

*p* → *r*

*~r*

∴ r

1. A. Output Sirkuit Kombinatorik



B.