

| ActionType            | ActionLocation                    | ActionGuidance                              | ActionRecoverabilit                    | UnintuitivePlantRes |   |
|-----------------------|-----------------------------------|---------------------------------------------|----------------------------------------|---------------------|---|
| 0:NULL                | 0:NULL                            | 0:NULL                                      | 0:NULL                                 | 0: Not Exist        |   |
| 1:Simple and Distinct | 1:Main or Auxiliary Control Board | 1:Procedure                                 | 1:Immediately Recoverable              | 1: Exist            |   |
| 2:Order               | 2:Back Control Panels             | 2:Skill of the Craft (Non-Faulted Hardware) | 2:Recoverable With Significant Efforts |                     |   |
| 3:Maintaining         |                                   | 3:STAR (Faulted Hardware)                   | 3:Unrecoverable                        |                     |   |
|                       | 2                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 1                                 | 1                                           | 3                                      | 3                   | 0 |
|                       | 1                                 | 1                                           | 3                                      | 1                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 3                   | 0 |
|                       | 1                                 | 1                                           | 2                                      | 3                   | 0 |
|                       | 1                                 | 1                                           | 3                                      | 1                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 3                   | 0 |
|                       | 3                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 3                                 | 1                                           | 2                                      | 2                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 2                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 3                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 0                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 3                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 3                                      | 1                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 3                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 3                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 0                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 3                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 3                                 | 1                                           | 1                                      | 2                   | 0 |
|                       | 2                                 | 1                                           | 1                                      | 1                   | 0 |
|                       | 1                                 | 1                                           | 1                                      | 2                   | 0 |

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| 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 2 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 2 | 0 |
| 2 | 2 | 1 | 2 | 0 |
| 3 | 1 | 1 | 2 | 0 |
| 3 | 1 | 1 | 3 | 0 |
| 0 | 1 | 1 | 3 | 0 |
| 3 | 1 | 1 | 2 | 0 |
| 3 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 3 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 2 | 0 |
| 2 | 1 | 1 | 1 | 0 |
| 3 | 1 | 1 | 1 | 0 |
| 3 | 1 | 1 | 2 | 0 |
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| 3 | 1 | 1 | 3 | 0 |
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| 1 | 1 | 1 | 3 | 0 |
| 0 | 1 | 1 | 1 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 3 | 0 |
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| 2 | 2 | 1 | 1 | 0 |
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| 0 | 1 | 1 | 2 | 0 |
| 3 | 1 | 1 | 1 | 0 |
| 1 | 2 | 1 | 1 | 0 |
| 2 | 1 | 1 | 1 | 0 |
| 2 | 1 | 1 | 1 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 3 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 3 | 1 | 1 | 2 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 1 | 1 | 1 | 2 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 1 | 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 3 | 0 |
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| 1 | 1 | 1 | 1 | 0 |
| 0 | 1 | 1 | 2 | 0 |
| 1 | 2 | 1 | 1 | 0 |
| 0 | 1 | 1 | 1 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 1 | 1 | 3 | 2 | 0 |
| 3 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 3 | 1 | 2 | 3 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 3 | 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 1 | 0 |
| 2 | 1 | 2 | 2 | 0 |
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| 2 | 2 | 1 | 2 | 0 |
| 0 | 1 | 2 | 2 | 0 |
| 3 | 1 | 2 | 2 | 0 |
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| 3 | 1 | 1 | 1 | 0 |
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| 2 | 1 | 1 | 2 | 0 |
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| 1 | 1 | 1 | 3 | 0 |
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| 1 | 1 | 1 | 1 | 0 |
| 3 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 | 0 |
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| 2 | 1 | 1 | 3 | 0 |
| 1 | 1 | 1 | 1 | 0 |
| 2 | 2 | 1 | 1 | 0 |
| 1 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 2 | 0 |
| 3 | 1 | 1 | 1 | 0 |
| 1 | 1 | 2 | 1 | 0 |
| 3 | 1 | 1 | 3 | 0 |
| 1 | 1 | 3 | 3 | 0 |
| 1 | 1 | 1 | 3 | 0 |
| 0 | 1 | 1 | 3 | 0 |
| 3 | 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 1 | 0 |
| 2 | 1 | 1 | 1 | 0 |

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| 2 | 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 1 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 1 | 1 | 1 | 1 | 0 |
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| 1 | 1 | 1 | 1 | 0 |
| 3 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 3 | 0 |
| 2 | 1 | 1 | 2 | 1 |
| 0 | 1 | 1 | 3 | 0 |
| 1 | 2 | 1 | 1 | 0 |
| 2 | 2 | 1 | 2 | 0 |
| 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 2 | 0 | 1 |
| 1 | 1 | 1 | 0 | 0 |
| 0 | 1 | 2 | 3 | 0 |
| 1 | 1 | 1 | 2 | 0 |

| UnintuitiveControls | AdditionalMentalEffort | InadequateFeedback | SimilarControls | Workload     |
|---------------------|------------------------|--------------------|-----------------|--------------|
| 0: Not Exist        | 0: Not Exist           | 0: Not Exist       | 0: Not Exist    | 0:NULL       |
| 1: Exist            | 1: Exist               | 1: Exist           | 1: Exist        | 1:Normal     |
|                     |                        |                    |                 | 2:Concurrent |
|                     |                        |                    |                 | Demands      |
|                     |                        |                    |                 | 3:Multiple   |
|                     |                        |                    |                 | Concurrent   |
|                     |                        |                    |                 | Demands      |

[illegible]

|   |   |   |   |   |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
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| 0 | 0 | 0 | 0 | 2 |
| 0 | 1 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
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| 0 | 0 | 0 | 0 | 2 |
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| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
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| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |

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|---|---|---|---|---|
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| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 0 | 2 |
| 0 | 0 | 1 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
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| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 1 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 1 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |

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| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 3 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 2 |

| TimeCriticality                  | ExtendOfCommuni                              | NonStandard  | NoisyBackground | Coordination |
|----------------------------------|----------------------------------------------|--------------|-----------------|--------------|
| 0:NULL                           | 0:NULL                                       | 0: Not exist | 0: Not exist    | 0: Not exist |
| 1:Expansive Time Available       | 1:Nominal Communication                      | 1: Exist     | 1: Exist        | 1: Exist     |
| 2:Nominal Time Available         | 2:Extensive Onsite Communication             |              |                 |              |
| 3:Barely Adequate Time Available | 3:Extensive Communication Within the Control |              |                 |              |
|                                  | 1                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 1               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 0            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 3                                            | 1            | 1               | 0            |
|                                  | 3                                            | 2            | 0               | 0            |
|                                  | 3                                            | 2            | 0               | 0            |
|                                  | 1                                            | 1            | 0               | 0            |
|                                  | 0                                            | 0            | 0               | 0            |
|                                  | 1                                            | 1            | 0               | 0            |
|                                  | 1                                            | 1            | 0               | 0            |
|                                  | 3                                            | 3            | 0               | 0            |
|                                  | 3                                            | 3            | 0               | 0            |
|                                  | 3                                            | 3            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 2            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 1                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 1                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 1               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 1            | 0               | 0            |
|                                  | 2                                            | 2            | 1               | 0            |
|                                  | 2                                            | 2            | 0               | 0            |
|                                  | 2                                            | 2            | 0               | 0            |
|                                  | 2                                            | 2            | 0               | 0            |
|                                  | 2                                            | 2            | 0               | 0            |
|                                  | 2                                            | 2            | 0               | 0            |

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| 2 | 2 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 3 | 3 | 1 | 0 | 0 |
| 3 | 3 | 1 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 1 | 0 | 0 |
| 2 | 1 | 1 | 0 | 0 |
| 2 | 1 | 1 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 1 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 1 | 3 | 0 | 0 | 0 |
| 3 | 2 | 1 | 0 | 0 |
| 3 | 2 | 1 | 0 | 0 |
| 3 | 2 | 1 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 3 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |

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| 2 | 2 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 3 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 3 | 2 | 0 | 0 | 0 |
| 3 | 2 | 0 | 0 | 0 |
| 3 | 2 | 0 | 0 | 0 |
| 3 | 2 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 1 | 1 | 1 | 0 | 0 |
| 2 | 2 | 1 | 0 | 0 |
| 2 | 2 | 1 | 0 | 0 |
| 2 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 2 | 1 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |

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|---|---|---|---|---|
| 2 | 2 | 0 | 0 | 0 |
| 2 | 3 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 3 | 1 | 0 | 0 |
| 1 | 3 | 1 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 |
| 2 | 1 | 1 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 3 | 2 | 0 | 0 | 0 |
| 2 | 2 | 1 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 |

| CommunicatorUnan | MultipleDemand | MemoryDemand | UNSAT# | Opportunity# |
|------------------|----------------|--------------|--------|--------------|
| 0: Not exist     | 0: Not exist   | 0: Not exist |        |              |
| 1: Exist         | 1: Exist       | 1: Exist     |        |              |

|   |   |   |   |     |
|---|---|---|---|-----|
| 0 | 0 | 0 | 1 | 103 |
| 0 | 0 | 0 | 0 | 13  |
| 0 | 1 | 0 | 1 | 12  |
| 0 | 0 | 0 | 0 | 4   |
| 0 | 0 | 0 | 0 | 29  |
| 0 | 0 | 0 | 0 | 31  |
| 0 | 1 | 0 | 0 | 73  |
| 0 | 1 | 0 | 1 | 32  |
| 0 | 0 | 0 | 1 | 32  |
| 0 | 1 | 0 | 0 | 32  |
| 0 | 1 | 0 | 1 | 32  |
| 0 | 0 | 0 | 0 | 116 |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 2 | 57  |
| 0 | 0 | 0 | 0 | 26  |
| 0 | 0 | 0 | 0 | 26  |
| 0 | 0 | 0 | 0 | 70  |
| 0 | 0 | 0 | 0 | 39  |
| 0 | 0 | 0 | 0 | 157 |
| 0 | 0 | 0 | 1 | 10  |
| 0 | 0 | 0 | 0 | 49  |
| 0 | 0 | 0 | 1 | 141 |
| 0 | 0 | 1 | 0 | 10  |
| 0 | 1 | 0 | 0 | 13  |
| 0 | 1 | 0 | 0 | 43  |
| 0 | 1 | 0 | 0 | 44  |
| 0 | 1 | 0 | 0 | 26  |
| 0 | 0 | 0 | 0 | 94  |
| 0 | 0 | 0 | 0 | 55  |
| 0 | 0 | 0 | 0 | 91  |
| 0 | 0 | 0 | 0 | 12  |
| 0 | 0 | 0 | 0 | 24  |
| 0 | 0 | 0 | 0 | 26  |
| 0 | 0 | 0 | 0 | 9   |
| 0 | 0 | 0 | 0 | 24  |
| 0 | 0 | 0 | 1 | 211 |
| 0 | 0 | 0 | 0 | 9   |
| 0 | 0 | 0 | 0 | 91  |
| 0 | 0 | 0 | 0 | 26  |
| 0 | 0 | 0 | 1 | 67  |
| 0 | 0 | 0 | 0 | 25  |

|   |   |   |   |    |
|---|---|---|---|----|
| 0 | 0 | 0 | 2 | 50 |
| 0 | 0 | 0 | 1 | 36 |
| 0 | 0 | 0 | 3 | 72 |
| 0 | 0 | 0 | 0 | 62 |
| 0 | 0 | 0 | 0 | 15 |
| 0 | 0 | 0 | 0 | 15 |
| 0 | 0 | 0 | 0 | 14 |
| 0 | 0 | 0 | 0 | 14 |
| 0 | 1 | 0 | 1 | 14 |
| 0 | 1 | 0 | 0 | 14 |
| 0 | 1 | 0 | 0 | 14 |
| 0 | 1 | 0 | 1 | 57 |
| 0 | 0 | 0 | 0 | 57 |
| 0 | 0 | 0 | 0 | 72 |
| 0 | 0 | 0 | 0 | 36 |
| 0 | 0 | 0 | 0 | 65 |
| 0 | 0 | 0 | 1 | 40 |
| 0 | 0 | 0 | 0 | 55 |
| 0 | 0 | 0 | 0 | 14 |
| 0 | 0 | 0 | 0 | 65 |
| 0 | 0 | 0 | 0 | 14 |
| 0 | 0 | 0 | 0 | 14 |
| 0 | 0 | 0 | 5 | 27 |
| 0 | 0 | 1 | 0 | 14 |
| 0 | 0 | 1 | 1 | 30 |
| 0 | 0 | 0 | 0 | 30 |
| 0 | 0 | 0 | 0 | 30 |
| 0 | 1 | 0 | 0 | 29 |
| 0 | 0 | 0 | 0 | 57 |
| 0 | 1 | 0 | 0 | 45 |
| 0 | 0 | 0 | 0 | 16 |
| 0 | 0 | 0 | 1 | 16 |
| 0 | 0 | 0 | 5 | 16 |
| 0 | 0 | 0 | 0 | 30 |
| 0 | 0 | 0 | 0 | 16 |
| 0 | 0 | 0 | 0 | 56 |
| 0 | 0 | 0 | 1 | 27 |
| 0 | 1 | 0 | 0 | 15 |
| 0 | 0 | 0 | 0 | 42 |
| 0 | 0 | 0 | 0 | 15 |
| 0 | 0 | 0 | 0 | 15 |
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| 0 | 0 | 0 | 0 | 15 |
| 0 | 0 | 0 | 0 | 30 |
| 0 | 0 | 0 | 0 | 15 |
| 0 | 0 | 0 | 2 | 30 |
| 0 | 0 | 0 | 0 | 28 |
| 0 | 0 | 0 | 0 | 28 |
| 0 | 0 | 0 | 0 | 55 |
| 0 | 0 | 0 | 0 | 28 |

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| 0 | 0 | 0 | 0 | 54  |
| 0 | 0 | 0 | 0 | 54  |
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| 0 | 0 | 0 | 0 | 14  |
| 0 | 1 | 0 | 0 | 14  |
| 0 | 1 | 0 | 0 | 14  |
| 0 | 0 | 0 | 1 | 33  |
| 0 | 0 | 0 | 0 | 27  |
| 0 | 0 | 0 | 1 | 132 |
| 0 | 0 | 0 | 0 | 33  |
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| 0 | 0 | 0 | 0 | 26  |
| 0 | 0 | 0 | 0 | 65  |
| 0 | 0 | 0 | 0 | 27  |
| 1 | 0 | 0 | 0 | 25  |
| 0 | 0 | 0 | 0 | 26  |
| 0 | 0 | 0 | 1 | 11  |
| 0 | 0 | 0 | 0 | 42  |
| 0 | 1 | 0 | 0 | 26  |
| 0 | 1 | 0 | 1 | 12  |
| 0 | 0 | 1 | 0 | 26  |
| 0 | 0 | 1 | 0 | 12  |
| 0 | 0 | 1 | 0 | 12  |
| 0 | 0 | 1 | 0 | 26  |
| 0 | 0 | 1 | 0 | 25  |
| 0 | 0 | 1 | 1 | 24  |
| 0 | 0 | 1 | 0 | 12  |
| 0 | 1 | 0 | 1 | 25  |
| 0 | 0 | 0 | 0 | 39  |
| 0 | 0 | 0 | 0 | 28  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 0 | 27  |
| 0 | 0 | 0 | 0 | 13  |
| 0 | 0 | 0 | 3 | 14  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 1 | 23  |
| 0 | 0 | 0 | 0 | 30  |
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| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 0 | 0 | 0 | 14  |
| 0 | 1 | 0 | 0 | 16  |
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| 0 | 0 | 1 | 0 | 14 |
| 0 | 0 | 0 | 2 | 18 |
| 0 | 0 | 0 | 0 | 17 |
| 0 | 0 | 0 | 0 | 10 |
| 0 | 0 | 0 | 0 | 11 |
| 0 | 1 | 0 | 1 | 13 |
| 0 | 0 | 0 | 4 | 12 |
| 0 | 0 | 0 | 0 | 26 |
| 0 | 0 | 0 | 0 | 15 |
| 0 | 0 | 0 | 0 | 13 |
| 0 | 0 | 0 | 0 | 13 |
| 0 | 0 | 1 | 1 | 13 |
| 0 | 0 | 0 | 0 | 7  |
| 0 | 1 | 0 | 1 | 7  |
| 0 | 0 | 0 | 0 | 2  |
| 0 | 0 | 0 | 0 | 13 |
| 0 | 1 | 0 | 0 | 13 |
| 0 | 1 | 0 | 0 | 13 |