## Item Difficulty (Easiness/Popularity/Prevalence) Indexes

## **Analysis for All Items**

## + = Easy Item - = Difficult Item

| Obs | Item | ItemDifficultyIndex | Level |
|-----|------|---------------------|-------|
| 1   | V1   | 0.58182             |       |
| 2   | V2   | 0.89697             | +     |
| 3   | V3   | 0.76818             | +     |
| 4   | V4   | 0.62273             |       |
| 5   | V5   | 0.78939             | +     |
| 6   | V6   | 0.26364             | -     |
| 7   | V7   | 0.12121             | -     |
| 8   | V8   | 0.38485             |       |
| 9   | V9   | 0.55606             |       |
| 10  | V10  | 0.36364             |       |
| 11  | V11  | 0.98485             | +     |
| 12  | V12  | 0.19242             | _     |
| 13  | V13  | 0.99697             | +     |
| 14  | V14  | 0.87121             | +     |
| 15  | V15  | 0.46818             |       |
| 16  | V16  | 0.93485             | +     |
| 17  | V17  | 0.25455             | -     |
| 18  | V18  | 0.90455             | +     |
| 19  | V19  | 0.90303             | +     |
| 20  | V20  | 0.38636             |       |
| 21  | V20  | 0.96667             | +     |
| 22  | V21  | 0.82576             | +     |
| 23  | V22  | 0.31515             | т     |
| 24  | V23  | 0.80303             | +     |
|     |      |                     | Т     |
| 25  | V25  | 0.30303             |       |
| 26  | V26  | 0.68182             |       |
| 27  | V27  | 0.53182             |       |
| 28  | V28  | 0.39848             |       |
| 29  | V29  | 0.73030             | +     |
| 30  | V30  | 0.97576             | +     |
| 31  | V31  | 0.14091             | -     |
| 32  | V32  | 0.98939             | +     |
| 33  | V33  | 0.50455             |       |
| 34  | V34  | 0.51818             |       |
| 35  | V35  | 0.14091             | -     |
| 36  | V36  | 0.63788             |       |
| 37  | V37  | 0.97879             | +     |
| 38  | V38  | 0.70303             | +     |
| 39  | V39  | 0.70000             | +     |
| 40  | V40  | 0.93788             | +     |
| 41  | V41  | 0.96818             | +     |
| 42  | V42  | 0.94394             | +     |
| 43  | V43  | 0.98636             | +     |
| 44  | V44  | 0.89091             | +     |
|     |      |                     |       |

|     |      | Results. IIW 2.test1 | difficulty |
|-----|------|----------------------|------------|
| Obs | Item | ItemDifficultyIndex  | Level      |
| 46  | V46  | 0.88939              | +          |
| 47  | V47  | 0.39242              |            |
| 48  | V48  | 0.51061              |            |
| 49  | V49  | 0.48030              |            |
| 50  | V50  | 0.50000              |            |
| 51  | V51  | 0.93939              | +          |
| 52  | V52  | 0.87576              | +          |
| 53  | V53  | 0.73030              | +          |
| 54  | V54  | 0.45000              |            |
| 55  | V55  | 0.93788              | +          |
| 56  | V56  | 0.99848              | +          |
| 57  | V57  | 0.13333              | -          |
| 58  | V58  | 0.99091              | +          |
| 59  | V59  | 0.66970              |            |
| 60  | V60  | 0.17121              | -          |
| 61  | V61  | 0.87121              | +          |
| 62  | V62  | 0.00606              | -          |
| 63  | V63  | 0.02727              | -          |
| 64  | V64  | 0.54242              |            |
| 65  | V65  | 0.96515              | +          |
| 66  | V66  | 0.91667              | +          |
| 67  | V67  | 0.99848              | +          |
| 68  | V68  | 0.83030              | +          |
| 69  | V69  | 0.22727              | -          |
| 70  | V70  | 0.97424              | +          |
| 71  | V71  | 0.78636              | +          |
| 72  | V72  | 0.53182              |            |
| 73  | V73  | 0.30909              |            |
| 74  | V74  | 0.97576              | +          |
| 75  | V75  | 0.93333              | +          |
| 76  | V76  | 0.94848              | +          |
| 77  | V77  | 0.19697              | -          |
| 78  | V78  | 0.81667              | +          |
| 79  | V79  | 0.41364              |            |
| 80  | V80  | 0.91364              | +          |
| 81  | V81  | 0.03182              | -          |
| 82  | V82  | 0.69697              |            |
| 83  | V83  | 0.88182              | +          |
| 84  | V84  | 0.04697              | -          |
| 85  | V85  | 0.69394              |            |
| 86  | V86  | 0.27727              | -          |
| 87  | V87  | 0.62727              |            |
| 88  | V88  | 0.72121              | +          |
| 89  | V89  | 0.01364              | -          |
| 90  | V90  | 0.87121              | +          |
| 91  | V91  | 0.95152              | +          |
| 92  | V92  | 0.65455              |            |
| 93  | V93  | 0.99697              | +          |
| 94  | V94  | 0.99848              | +          |
| 95  | V95  | 0.74394              | +          |
|     |      |                      |            |

| Obs | Item | ItemDifficultyIndex | Level |
|-----|------|---------------------|-------|
| 96  | V96  | 0.89848             | +     |
| 97  | V97  | 0.74394             | +     |
| 98  | V98  | 0.13030             | -     |
| 99  | V99  | 0.80758             | +     |
| 100 | V100 | 0.94697             | +     |

## **Analysis for All Items**

#### The MEANS Procedure

|     | Analysis Variable : ItemDifficultyIndex |         |         |         |
|-----|---|---------|---------|---------|
| N   | Mean                                    | Std Dev | Minimum | Maximum |
| 100 | 0.65                                    | 0.30    | 0.01    | 1.00    |

## Item Difficulty (Easiness/Popularity/Prevalence) Indexes

## **Analysis for Retained Items**

| Obs | Item | ItemDifficultyIndex |
|-----|------|---------------------|
| 1   | V1   | 0.58182             |
| 2   | V4   | 0.62273             |
| 3   | V8   | 0.38485             |
| 4   | V9   | 0.55606             |
| 5   | V10  | 0.36364             |
| 6   | V15  | 0.46818             |
| 7   | V20  | 0.38636             |
| 8   | V23  | 0.31515             |
| 9   | V25  | 0.30303             |
| 10  | V26  | 0.68182             |
| 11  | V27  | 0.53182             |
| 12  | V28  | 0.39848             |
| 13  | V33  | 0.50455             |
| 14  | V34  | 0.51818             |
| 15  | V36  | 0.63788             |
| 16  | V47  | 0.39242             |
| 17  | V48  | 0.51061             |
| 18  | V49  | 0.48030             |
| 19  | V50  | 0.50000             |
| 20  | V54  | 0.45000             |
| 21  | V59  | 0.66970             |
| 22  | V64  | 0.54242             |
| 23  | V72  | 0.53182             |
| 24  | V73  | 0.30909             |
| 25  | V79  | 0.41364             |
| 26  | V82  | 0.69697             |
| 27  | V85  | 0.69394             |
| 28  | V87  | 0.62727             |
| 29  | V92  | 0.65455             |

# **Analysis for Retained Items**

### The MEANS Procedure

| Analysis Variable : ItemDifficultyIndex |      |         |         |         |
|---|------|---------|---------|---------|
| N                                       | Mean | Std Dev | Minimum | Maximum |
| 29                                      | 0.51 | 0.12    | 0.30    | 0.70    |