**التوزيعات المحتملة للسيارات في المثال الأول**

|  |  |  |  |
| --- | --- | --- | --- |
| **المسار** | **ABD** | **ACD** | **الزمن الكلي** |
| عدد السيارات | 0 | 4 | $4×9=36$  |
| 1 | 3 | $1×6+3×8=30$  |
| 2 | 2 | $2×7+2×7=28$  |
| 3 | 1 | $3×8+1×6=30$  |
| 4 | 0 | $4×9=36$  |

لاحظ أنه تم التوصل لأفضل أداء لشبكة الطرق في حالة اتزان ناش، حيث الزمن الكلي لجميع السيارات 28 دقيقة.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **المسار** | **ABD** | **ABCD** | **ACD** | **الزمن الكلي** |
| **عدد السيارات** | 0 | 0 | 4 | $4×9=36$  |
| 1 | 0 | 3 | $1×6+3×8=30$  |
| **2** | **0** | **2** | $2×7+2×7=28$ |
| 3 | 0 | 1 | $3×8+1×6=30$  |
| 4 | 0 | 0 | $4×9=36$  |
| 0 | 1 | 3 | $1×5+3×9=32$  |
| **1** | **1** | **2** | $1×7+1×5+2×8=28$ |
| **2** | **1** | **1** | $2×8+1×5+1×7=28$ |
| 3 | 1 | 0 | $3×9+1×5=32$  |
| 0 | 2 | 2 | $$2×6+2×9=30$$ |
| **1** | **2** | **1** | $1×8+2×6+1×8=28$ |
| 2 | 2 | 0 | $2×9+2×6=30$  |
| 0 | 3 | 1 | $3×7+1×9=30$  |
| 1 | 3 | 0 | $1×9+3×7=30$  |
| 0 | 4 | 0 | $4×8=32$  |

**التوزيعات المحتملة للسيارات في المثال الثاني**

لاحظ أنه لم يتم التوصل لأفضل أداء لشبكة الطرق في حالة اتزان ناش، حيث الزمن الكلي لجميع السيارات في هذه الحالة 32 دقيقة بينما أفضل زمن هو 28 دقيقة.

**Possible distributions of the cars in Example I**

|  |  |  |  |
| --- | --- | --- | --- |
| **Route** | **ABD** | **ACD** | **Total Time** |
| number of cars | 0 | 4 | $4×9=36$  |
| 1 | 3 | $1×6+3×8=30$  |
| 2 | 2 | $2×7+2×7=28$  |
| 3 | 1 | $3×8+1×6=30$  |
| 4 | 0 | $4×9=36$  |

Notice that the best possible time was reached when the network was at Nash Equilibrium and is 28 minutes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Route** | **ABD** | **ABCD** | **ACD** | **Total Time** |
| **number of cars** | 0 | 0 | 4 | $4×9=36$  |
| 1 | 0 | 3 | $1×6+3×8=30$  |
| **2** | **0** | **2** | $2×7+2×7=28$ |
| 3 | 0 | 1 | $3×8+1×6=30$  |
| 4 | 0 | 0 | $4×9=36$  |
| 0 | 1 | 3 | $1×5+3×9=32$  |
| **1** | **1** | **2** | $1×7+1×5+2×8=28$ |
| **2** | **1** | **1** | $2×8+1×5+1×7=28$ |
| 3 | 1 | 0 | $3×9+1×5=32$  |
| 0 | 2 | 2 | $$2×6+2×9=30$$ |
| **1** | **2** | **1** | $1×8+2×6+1×8=28$ |
| 2 | 2 | 0 | $2×9+2×6=30$  |
| 0 | 3 | 1 | $3×7+1×9=30$  |
| 1 | 3 | 0 | $1×9+3×7=30$  |
| 0 | 4 | 0 | $4×8=32$  |

**Possible distributions of the cars in Example II**

Notice that the best possible total time was not reached when the network was at Nash Equilibrium, since the total time in this case was 32 minutes while the best possible total tome is 28 minutes.