**Exercise**

A steel mill produces two types of steel alloy: boral and chromal. Production of each alloy requires three processes: Box anneal, Cold Roll, and Strand anneal. Production capacities are:

|  |  |
| --- | --- |
| Box anneal: | 4,000 hours/month |
| Cold Roll: | 500 hours/month |
| Strand anneal: | 1,000 hours/month |

Production rates in tons per hour are:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Box anneal** | **Cold roll pass 1** | **Strand anneal** | **Cold roll pass 2** |
| **Boral** | 4 | 72 | 11 | 36 |
| **Chromal** | 2 | Not required | 20 | 24 |

The maximum demand for boral is 10,500 tons/month and for chromal 6,000 tons/month. The contributions/ton are boral: $25, and chromal: $35.

**Question**

**What combination of boral and chromal maximizes total monthly contribution?**