**Informações Iniciais:**

|  |
| --- |
| **MAX Z:  3x1 + 2x2  Regras:  2x1 + 1x2 <= 100 1x1 + 1x2 <= 80 1x1 <= 40  Quantidade maxima iterações: 8** |

**Tabela Inicial:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **f1** | **2** | **1** | **1** | **0** | **0** | **100** |
| **f2** | **1** | **1** | **0** | **1** | **0** | **80** |
| **f3** | **1** | **0** | **0** | **0** | **1** | **40** |
| **z** | **-3** | **-2** | **0** | **0** | **0** | **0** |

**Iteracao: 1**

**Menor valor encontrado: -3**

**Efetuando divisão:**

|  |
| --- |
| **Regras:  1\* - f1 - 50 2\* - f2 - 80 3\* - f3 - 40** |

**Menor valor encontrado apos a divisao: 40**

**Entra: x1 Sai: f3**

**Pivo: 1**

**Tabela Após dividir pelo pivo:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **f1** | **2** | **1** | **1** | **0** | **0** | **100** |
| **f2** | **1** | **1** | **0** | **1** | **0** | **80** |
| **x1** | **1** | **0** | **0** | **0** | **1** | **40** |
| **z** | **-3** | **-2** | **0** | **0** | **0** | **0** |

**Tabela Após processo de divisao por linha:**

**Processo Linha: 1**

**ValorEspecial: -2**

**1 \* -2 + 2 = 0**

**0 \* -2 + 1 = 1**

**0 \* -2 + 1 = 1**

**0 \* -2 + 0 = 0**

**1 \* -2 + 0 = -2**

**40 \* -2 + 100 = 20**

**Processo Linha: 2**

**ValorEspecial: -1**

**1 \* -1 + 1 = 0**

**0 \* -1 + 1 = 1**

**0 \* -1 + 0 = 0**

**0 \* -1 + 1 = 1**

**1 \* -1 + 0 = -1**

**40 \* -1 + 80 = 40**

**Processo Linha: 4**

**ValorEspecial: 3**

**1 \* 3 + -3 = 0**

**0 \* 3 + -2 = -2**

**0 \* 3 + 0 = 0**

**0 \* 3 + 0 = 0**

**1 \* 3 + 0 = 3**

**40 \* 3 + 0 = 120**

**Tabela final da iteracao:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **f1** | **0** | **1** | **1** | **0** | **-2** | **20** |
| **f2** | **0** | **1** | **0** | **1** | **-1** | **40** |
| **x1** | **1** | **0** | **0** | **0** | **1** | **40** |
| **z** | **0** | **-2** | **0** | **0** | **3** | **120** |

**Iteracao: 2**

**Menor valor encontrado: -2**

**Efetuando divisão:**

|  |
| --- |
| **Regras:  1\* - f1 - 20 2\* - f2 - 40 3\* - Não efetua divisão** |

**Menor valor encontrado apos a divisao: 20**

**Entra: x2 Sai: f1**

**Pivo: 1**

**Tabela Após dividir pelo pivo:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **x2** | **0** | **1** | **1** | **0** | **-2** | **20** |
| **f2** | **0** | **1** | **0** | **1** | **-1** | **40** |
| **x1** | **1** | **0** | **0** | **0** | **1** | **40** |
| **z** | **0** | **-2** | **0** | **0** | **3** | **120** |

**Tabela Após processo de divisao por linha:**

**Processo Linha: 2**

**ValorEspecial: -1**

**0 \* -1 + 0 = 0**

**1 \* -1 + 1 = 0**

**1 \* -1 + 0 = -1**

**0 \* -1 + 1 = 1**

**-2 \* -1 + -1 = 1**

**20 \* -1 + 40 = 20**

**Processo Linha: 4**

**ValorEspecial: 2**

**0 \* 2 + 0 = 0**

**1 \* 2 + -2 = 0**

**1 \* 2 + 0 = 2**

**0 \* 2 + 0 = 0**

**-2 \* 2 + 3 = -1**

**20 \* 2 + 120 = 160**

**Tabela final da iteracao:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **x2** | **0** | **1** | **1** | **0** | **-2** | **20** |
| **f2** | **0** | **0** | **-1** | **1** | **1** | **20** |
| **x1** | **1** | **0** | **0** | **0** | **1** | **40** |
| **z** | **0** | **0** | **2** | **0** | **-1** | **160** |

**Iteracao: 3**

**Menor valor encontrado: -2**

**Efetuando divisão:**

|  |
| --- |
| **Regras:  1\* - x2 - -10 2\* - f2 - 20 3\* - x1 - 40** |

**Menor valor encontrado apos a divisao: 20**

**Entra: f3 Sai: f2**

**Pivo: 1**

**Tabela Após dividir pelo pivo:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **x2** | **0** | **1** | **1** | **0** | **-2** | **20** |
| **f3** | **0** | **0** | **-1** | **1** | **1** | **20** |
| **x1** | **1** | **0** | **0** | **0** | **1** | **40** |
| **z** | **0** | **0** | **2** | **0** | **-1** | **160** |

**Tabela Após processo de divisao por linha:**

**Processo Linha: 1**

**ValorEspecial: 2**

**0 \* 2 + 0 = 0**

**0 \* 2 + 1 = 1**

**-1 \* 2 + 1 = -1**

**1 \* 2 + 0 = 2**

**1 \* 2 + -2 = 0**

**20 \* 2 + 20 = 60**

**Processo Linha: 3**

**ValorEspecial: -1**

**0 \* -1 + 1 = 1**

**0 \* -1 + 0 = 0**

**-1 \* -1 + 0 = 1**

**1 \* -1 + 0 = -1**

**1 \* -1 + 1 = 0**

**20 \* -1 + 40 = 20**

**Processo Linha: 4**

**ValorEspecial: 1**

**0 \* 1 + 0 = 0**

**0 \* 1 + 0 = 0**

**-1 \* 1 + 2 = 1**

**1 \* 1 + 0 = 1**

**1 \* 1 + -1 = 0**

**20 \* 1 + 160 = 180**

**Tabela final da iteracao:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **x2** | **0** | **1** | **-1** | **2** | **0** | **60** |
| **f3** | **0** | **0** | **-1** | **1** | **1** | **20** |
| **x1** | **1** | **0** | **1** | **-1** | **0** | **20** |
| **z** | **0** | **0** | **1** | **1** | **0** | **180** |

**Variaveis Básicas:**

**x2 = 60**

**f3 = 20**

**x1 = 20**

**z = 180**

**Variaveis Não Básicas:**

**f1 = 0**

**f2 = 0**

**Tabela Final:**

| **Base** | **x1** | **x2** | **f1** | **f2** | **f3** | **b** |
| --- | --- | --- | --- | --- | --- | --- |
| **x2** | **0** | **1** | **-1** | **2** | **0** | **60** |
| **f3** | **0** | **0** | **-1** | **1** | **1** | **20** |
| **x1** | **1** | **0** | **1** | **-1** | **0** | **20** |
| **z** | **0** | **0** | **1** | **1** | **0** | **180** |

**Analise de Sensibilidade:**

| **-** | **Valor Fim** | **Preço Sombra** | **MIN** | **MAX** |
| --- | --- | --- | --- | --- |
| **R1** | **60** | **1** | **40** | **80** |
| **R2** | **20** | **1** | **0** | **40** |
| **R3** | **20** | **0** | **20** | **20** |