|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Healthy Animals** | | | | |
| A = Food A |  |  |  |  |
| B = Food B |  |  |  |  |
| **Variables** | **Formula** | **Simplify** | **Simplified** | **Graph-Ready** |
| **Protein** | 2A + 6B ≥ 30 | 2A ≥ 30 – 6B | A ≥ 15 – 3B | **Y ≥ 15 – 3X** |
|  | *-6B -6B* | 2 2 |  |  |
| **Fat** | 4A + 2B ≥ 16 | 4A ≥ 16 – 2B | A ≥ 4 - .5B | **Y ≥ 4 - .5X** |
|  | *-2B -2B* | 4 4 |  |  |
| **Total Food** | A + B ≤ 12 |  | A ≤ 12 – B | **Y ≤ 12 – X** |
|  | *-B -B* |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Picturing Cookies– Part II** | | | | |
| P = Plain |  |  |  |  |
| I = Iced |  |  |  |  |
| Profit = $ |  |  |  |  |
| **Variables** | **Formula** | **Simplify** | **Simplified** | **Graph-Ready** |
| **Oven Space** | P + I ≤ 140 | ***I ≤ 140 - P*** | I ≤ 140 - P | **Y ≤ 140 - X** |
|  | *-P -P* |  |  |  |
| **Icing** | .4I ≤ 32 | I ≤ 80 | I ≤ 80 | **Y ≤ 80** |
|  | *.4 .4* |  |  |  |
| **Dough** | P + .7I ≤ 110 | .7I ≤ 110 - P | I ≤ 157 –p/.7 | **Y ≤ 157 –X/.7** |
|  | *-P -P* | .7 .7 |  |  |
| **Preparation** | .1P + .15I ≤ 15 | .15I ≤ 15 - .1P | I ≤ 100 - 2/3P | **Y ≤ 100 - 2/3X** |
|  | *-.1P -.1P* | .15 .15 |  |  |
|  |  |  |  |  |
| **Profit** | I = 7.00-5.00 | I = 2.00 | 2I + 1.5P = $ | **Y= .5$ - .75X** |
|  | P = 6.00 – 4.50 | P = 1.50 | i.e.: 2I + 1.5P = 100 | **$ = 2Y + 1.5X** |