In class Genetic Algorithms

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1.

Item Weight Cost

|  |  |  |
| --- | --- | --- |
| TV | 25lbs | $200 |
| Microwave | 15lbs | $50 |
| Necklace | 1lbs | $100 |
| Book | 5lb | $10 |
| Computer | 8lbs | $300 |
| Pencil | 1lbs | $0.25 |
| Banana | 2lbs | $1 |
| Diaper | 3lbs | $1 |
| Xbox | 15lbs | $150 |
| Cup | 10lbs | $5 |

2. if => -1

else =>

3.

|  |  |
| --- | --- |
| 1100101000 | $551 |
| 1001001110 | $362 |
| 0101111110 | $512.2 |
| 0111101110 | $612 |
| 1001101001 | $516 |
| 1010110010 | $750.25 |
|  |  |
|  |  |

4. TSP gives more crossover issues because unsolved weight. In genetic algorithm, weight is solved from the fitness function so crossover is cleaner.