1.5

a)

Y = 32 – 0.8X

b)

orchid: 640/40 = 16

fern: 640/32=20

c)

Y = 32 – 2X

d)

orchid: 640/16 = 40

fern: 640/32=20

2.1

|  |
| --- |
| Chart, line chart  Description automatically generated |

**What is the maximum number of cookies**

If he has a good income, he will consume cookies untill the marginal utility is zero. So, he will consume 6 cookies.

2.3

a)

Table

Description automatically generated

b)

Yes these preferences are consistent with the law of diminishing marginal utility. As more is consumed of each good, the marginal utility of additional consumption decreases, thereby yielding less and less satisfaction

c)

To maximize total satisfaction of consumption, the marginal utility per dollar of consumption for

both goods must be equal, without exceeding the total budget.

At 4 cigars and 4 brandies, marginal utility per dollar is 2 for both goods and total consumption

costs 4 cigars X $6 = $24 plus 4 brandies X $30 = $120.

To maximize total satisfaction of consumption, the marginal utility per dollar of consumption for

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At 4 cigars and 4 brandies, marginal utility per dollar is 2 for both goods and total consumption

costs 4 cigars X $6 = $24 plus 4 brandies X $30 = $120.

To maximize total satisfaction of consumption, the marginal utility per dollar of consumption of both goods must be equal, without exceeding the total budget.

At 4 cigars and 4brandies, marginal utility per dolar is 2 for both goods and total consumption costs 4 cigars \* 6 =24, means 120 dollars

1A.4

a)

100 = 5N + 10A

b)

while Pn = 10, demand of nuts = 5

while Pn = 2, demand of nuts = 9