Question 1 If he gives up 8 sodas he gets 4 pizzas. Thus, he get 2 sodas per pizza. Therefore,

the price of a soda is 3 Dollars

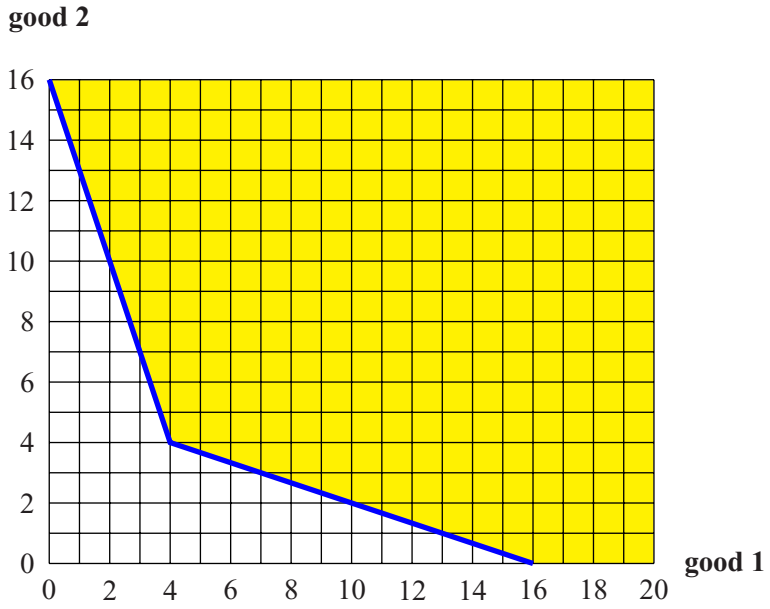
Question 2 For two units of good 1 she can acquire 1 unit of good 2. Therefore,

She can afford 10 units of good 2

Question 3

- (0, **16**),
- (2, **10**),
- (7, **3**),
- (**16**, 0),

Graph the indifference curve in the grid below and shade that set of all consumption choices that are strictly better than (4, 4).



Question 4 The partial derivatives are given by 1 and $2/\sqrt{x_2}$. The MRS is therefore $-\sqrt{x_2}/2$. Therefore,

MRS(16, 4) = −1

Question 5 If $x_2 = 10$ then $x_1 = 30$. Therefore, the income is $30p_1 + 10p_2$, i.e.,

$$\boxed{m = 300}$$

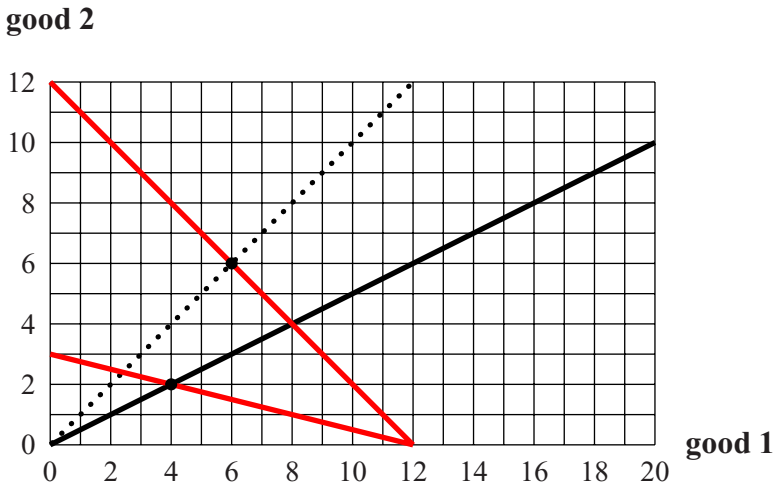
Question 6 The optimal choice is interior. Therefore, $p_1/p_2 = 4$.

$$\boxed{p_2 = 3}$$

Question 7 Again, the optimal choice is interior. Therefore,

$$\boxed{\text{MRS}(3, 7) = -\tfrac{5}{3}}$$

Question 8



demand for good 1 changes by −2 unit

demand for good 2 changes by −4 units

Question 9 At the optimal choice $\text{MRS}(x_1, x_2) = -\frac{4}{x_1+x_2+2} = -\frac{1}{2}$, which implies $8 = x_1 + x_2 + 2$, i.e., $x_1 + x_2 = 6$. The budget line equation is $x_1 + 2x_2 = 11$. Therefore,

$$\boxed{x_1 = 1 \quad x_2 = 5}$$

Question 10

At the optimal choice $x_1 = 12 \quad x_2 = 4$

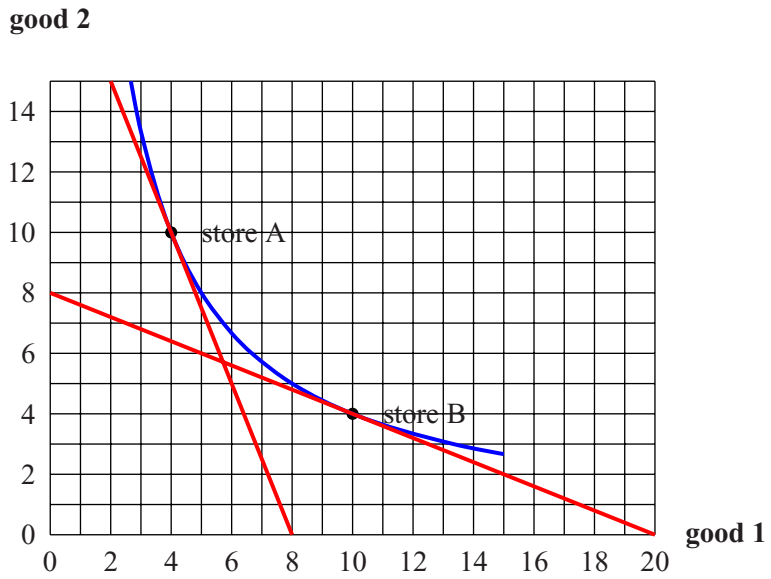
Question 11 The MRS is $-(20-2h)$. If the price of an hour of calls is 6 then $20-2h = 6$. Therefore $h = 7$.

The utility of not signing up is $u(0, 1000) = 1,000$. For hours of calls the person pays 42 Dollars. In addition he/she pays F. Therefore, $u(7, 1000 - 42 - F) = 1,000$, i.e., $1,049 - F = 1,000$. Therefore, F can be at most 49.

If the consumer signs up, he/she will call $h = 7$ hours

The company will select $F = 49$ as fixed fee

Question 12


good 2
14
12
10
8
6
4
2
0
store A
store B
0
2
4
6
8
10
12
14
16
18
20
good 1