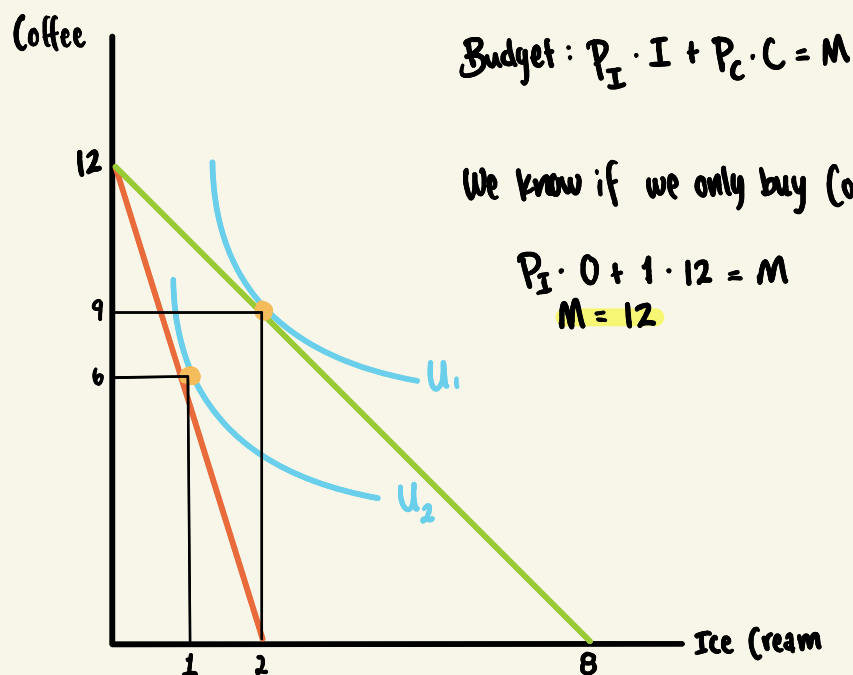Ch. 5 - Individual & Market Demand Achieve Homework

Q.6

Kemala spends her income on ice cream & coffee. Coffee sells for $1 a cup.

If ice cream sells for $1.50 per gallon, Kemala will buy how much ice cream:

Budget: $P_I \cdot I + P_C \cdot C = M$

We know if we only buy Coffee, we buy 12 cups:

$P_I \cdot 0 + 1 \cdot 12 = M$
$M = 12$

Now we know $M = 12$. We have to find out
what I is when $P_I = 1.5$.
First let's determine which line we're on:
If we buy only Ice Cream, we buy 2 gallons (Red BC) or 8 (green BC)

So at red BC we have:

$P_C \cdot C + P_I \cdot I = 12$
$P_C \cdot 0 + P_I \cdot 2 = 12$
$2P_I = 12$
$P_I = 12/2$
$P_I = 6$

At green BC we have:

$P_C \cdot C + P_I \cdot I = 12$
$P_C \cdot 0 + P_I \cdot 8 = 12$
$8P_I = 12$
$P_I = 12/8$
$P_I = 1.5$

So $P_I = 1.5$ on Green BC,
this is where we are
optimizing.
At this BC, we choose
2 gallons.