HW #4 (Reg)

1(a).

Slope of budget line = $-\frac{P_x}{P_y}$.

(b) $I = P_x X + P_y Y$.

(c) Candy

$\frac{400}{2} = 200$

$\frac{200}{2} = 100$

$\Rightarrow$ New Budget Line

$\Rightarrow$ Old Budget Line

$\Rightarrow \frac{200}{5} = 40$

Books
1 (d) $P_x$ decreases while $I + P_y$ stay fixed.

$P_x^2 < P_x'$

1 (e) Old Income $\#I_1$
Old Price $P_x$

New Income $\#I_2 = 2I_1$
New Price $P_x^2 < P_x'$ (same).

$\frac{I_1}{P_x}$

Old Budget Line

$\frac{I_2}{P_x'}$

New Budget Line.
2. 

Old Income = $I_1$
Old Prices $P_x', P_y'$

New Income = $I_2 \leq I_1$
New Prices $P_x' > P_x$
$P_y' \ (Same)$
I.e., not bowed in towards the origin. The principle of diminishing marginal utility does not hold.

I.e., are not bowed in towards origin they are straight lines.
∴ $X + Y$ are Perfect Substitutes.

$U_1 > U_2$ ⇒ More is not better.

$X + Y$ may be both (trash + noise pollution) ∴ Less of $X + Y$ makes you better off.
4. (a)
5. Changes in Income (Inferior Good)

Income ↑ ⇔ Demand ↓

- Income increase (↑) leads to a decrease in demand (↓)
- Graph shows the shift in demand from point 1 to point 2
- Utility levels U1 and U2 are depicted
- Price changes associated with demand shifts: $p_{x_1}$ and $p_{x_2}$