APR2 - Key

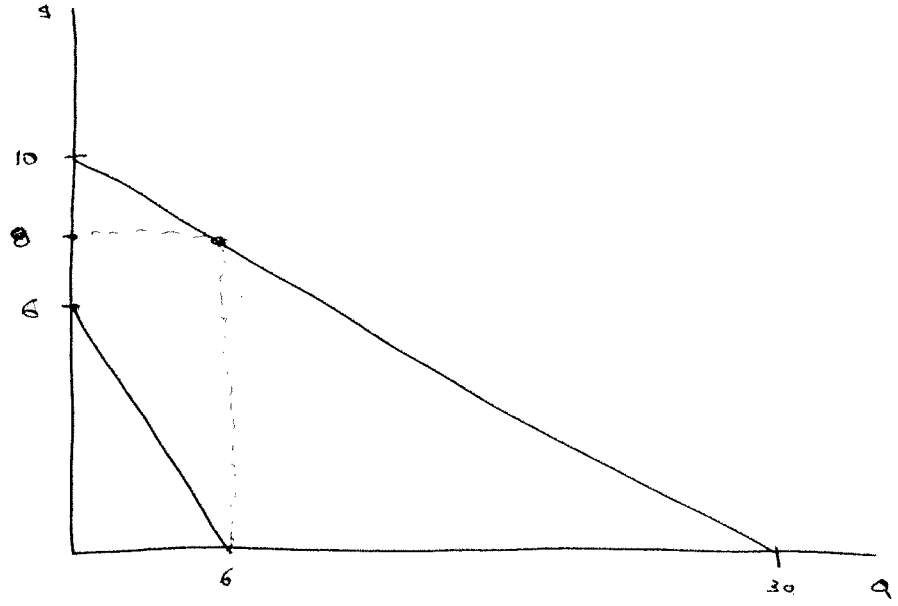
1

Lap

$P = 10 - \frac{Q}{3}$

Rec.

$P = 6 - Q$



Plan A

Lap → TWTP → $54 will buy CS → $36

Rec → TWTP → $18 will buy CS → $0

Plan B

Lap → TWTP → $150 → will buy CS → $60

Rec → not applicable

$\pi = 100 \cdot 90 + 100 \cdot 18 - 15,000 = -4,200$

Lap swimmers will buy the larger plan, but firm loses money.

2

Individual prices

NFL	⇒ 60	→	$120	− 20	=	$100
NASCAR	⇒ 40	→	$120	− 30	=	$90
AR	⇒ 80	→	$160	− 20	=	$140
PS3	⇒ 300	→	$900	− 600	=	$300
						$620

Bundles:

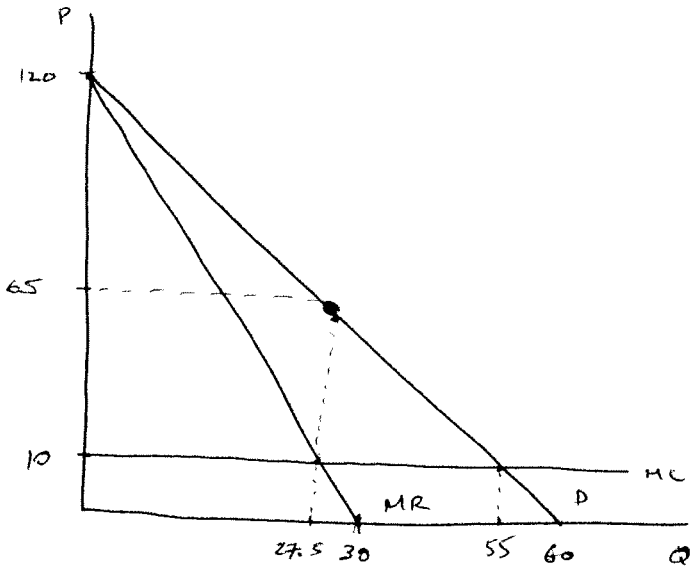
Type 1 → w to Pay	⇒	$465
Type 2	⇒	$590
Type 3	⇒	$600
Cost of Bundle	⇒	$230

Set bundle price at $590

$2 \cdot 590 - 230 \cdot 2 = \$720$

Note: If the numbers of consumers of each type weren't equal, then the analysis would change!

3



$P = 120 - 2Q$

$MR = 120 - 4Q$

$MC = 120 - 4Q = 10$

$110 = 4Q$

$Q^* = 27.5$

$P^* = 65$

a) $P^* = 65 \quad Q^* = 27.5$

$\pi = [65(27.5)] * 200 - [20{,}000 + 10(27.5 * 200)]$

$\pi = 282{,}500$

b) $P = MC \Rightarrow 120 - 2Q = 10$

$2Q = 110$

$Q^* = 55$

Membership fee. $\Rightarrow 1/2 \cdot 110 \cdot 55 = 3025$

Per round charge $\Rightarrow \$10$

$3025 + (\$10 \cdot 55) = \$3575$

$\pi = 3575 * 200 - [20{,}000 + 10(55 \cdot 200)]$

$\pi = 585{,}000$

4

a) $50 - \frac{1}{20}L = \frac{2}{20}L$

$50 = \frac{3}{20}L$

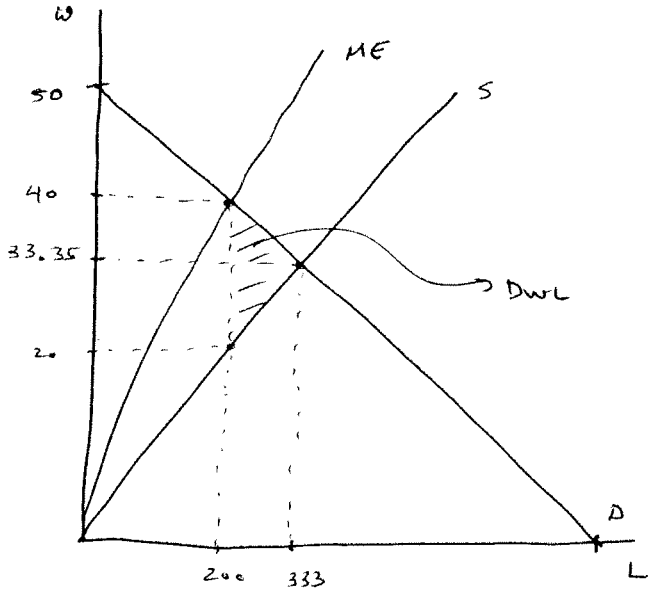
$L^* = 333 \qquad w^* = 33.35$

b) $50 - \frac{1}{20}L = \frac{4}{20}L$

$50 = \frac{5}{20}L$

$L^* = 200 \qquad w^* = 20$

c)



$DWL = 1/2 \cdot 20 \cdot 133$

$DWL = 1330$