Cost-Based Pricing Assignment – Ken Wood

An entrepreneur needs pricing help!

Chris, a local baker, is interested in opening her very own Cupcake Cafe—but to make it worth her while she needs to earn at least $35,000 per year in profit from all segments. She's lucked out and found an ideal location, right in the heart of a busy shopping district, and so expects big demand. Within a block of her location are five restaurants, and she is certain she can win contracts with at least two of them.

Chris knows from her prior work that restaurants are generally paying ~$18 per dozen cupcakes. Additionally, Chris has pre-existing relationships with several caterers and figures she'll bake for at least two events (weddings, showers, graduations, big parties) for 48 weekends each year. Each event usually results in orders of 150-500 cupcakes. She's also counting on heavy foot traffic from shoppers and office workers to her bakery for individual sales or by the dozen.

Chris calculates that it will cost $1.50 to produce each of the first 240 cupcakes she sells each day, but after that, costs will be reduced to $1 per cupcake. Although she'd like to avoid hiring more than one person at the start of her business, her cafe will be busiest from 12 -3 each day, when she'll likely need extra help to handle the register at $10 per hour.

Chris knows how hard it is to start a business and is ready to commit to opening the cafe six days a week minus 10 holidays throughout the year.

Cost-Based Pricing Chart - Ken Wood

Cost-based Pricing Assignment Chart

		Sales by Segment			
		Cafe sales to consumers 1 - 11 cupcakes	**Cafe sales to consumers Dozen increments**	**One time sales to caterers > 10 dozen/event**	**Contract sales to restaurants >10 dozen/ week**
Parts 1 & 2	**Cost-plus suggested pricing**	**Assumption:** 11 single cupcakes sold every day at margin of $3.50 per cupcake. **Full cost + target margin** = $1.00 + $3.50 = $4.50 each **Total profit** = (11 units/day) x ($3.50/unit margin) x (6 days/week x 48 weeks - (11 units/ day x $3.50/unit margin x 10 holidays) = **$10703**	**Assumption:** 7 dozen = 84 cupcakes sold every day at margin of $2.50 per cupcake. **Full cost + target margin** = $1.00 + $2.50 = $3.50 ($42.00 per dozen) **Total profit** = (84 units/day) x ($2.50/unit margin) x (6 days/week x 48 weeks - (84 units/ day x $2.50/unit margin x 10 holidays) = **$58380**	**Assumption:** 120 cupcakes per event x 2 events/week x 48 weeks = 11520 total units **Full cost + target margin** = $1.00 + $1.50 = $2.50 ($30.00 per dozen) **Total profit** = (240 units x ($1.50/unit margin) x 48 weeks = **$17280**	**Assumption:** price per dozen <= $18.00 and 10 dozen delivered weekly per contract. **Covers the cost of first 240 cupcakes every week.** 2 contracts/week x 10 dozen/contract x $18.00/dozen x 48 weeks = $17280.00 total revenue **Unit price** = $18.00/12 units = $1.50/unit **Full cost + target margin** = $1.50 + $0.0 = $1.50 each **Total profit** = 240 units/week x 47 weeks x $0.00 = **$0**
	Net profit = Total Profit – Labor Costs = ($11676 + $58380+ $17280 + $0) – ($10/hr x 3 hrs/day x 6 days/week x 48 weeks) = $86363 - $8640 = **$77723**				

		Sales by Segment			
		Cafe sales to consumers 1 - 11 cupcakes	**Cafe sales to consumers Dozen increments**	**One time sales to caterers > 10 dozen/event**	**Contract sales to restaurants >10 dozen/ week**
Parts 1 & 2	**Marginal cost pricing suggested price**	**Assumption:** 11 single cupcakes sold every day at margin of $3.50 per cupcake. **Full cost + target margin** = $1.00 + $3.50 = $4.50 each **Total profit** = (11 units/day) x ($3.50/unit margin) x (6 days/week x 48 weeks - (11 units/ day x $3.50/unit margin x 10 holidays) = **$10703**	**Assumption:** 7 dozen = 84 cupcakes sold every day at margin of $2.50 per cupcake. **Full cost + target margin** = $1.00 + $2.50 = $3.50 ($42.00 per dozen) **Total profit** = (84 units/day) x ($2.50/unit margin) x (6 days/week x 48 weeks - (84 units/ day x $2.50/unit margin x 10 holidays) = **$58380**	**Assumption:** 120 cupcakes per event x 2 events/week x 48 weeks = 11520 total units **Full cost + target margin** = $1.00 + $1.00 = $2.00 **($24.00 per dozen, a discount to caterers)** **Total profit** = (240 units x ($1.00/unit margin) x 48 weeks = **$11520**	**Assumption:** price per dozen <= $18.00 and 10 dozen delivered weekly per contract. **Covers the cost of first 240 cupcakes every week.** 2 contracts/week x 10 dozen/contract x $18.00/dozen x 48 weeks = $17280.00 total revenue **Unit price** = $18.00/12 units = $1.50/unit **Full cost + target margin** = $1.50 + $0.0 = $1.50 each **Total profit** = 240 units/week x 47 weeks x $0.00 = **$0**
	Net profit = Total Profit – Labor Costs = ($10703 + $58380+ $11520 + $0) – ($10/hr x 3 hrs/day x 6 days/week x 48 weeks) = $80603 - $8640 = **$71963**				

		Sales by Segment			
		Cafe sales to consumers 1 - 11 cupcakes	**Cafe sales to consumers Dozen increments**	**One time sales to caterers > 10 dozen/event**	**Contract sales to restaurants >10 dozen/ week**
Parts 1 & 2	**Peak load pricing suggested price**	**Assumption:** 11 single cupcakes sold every day. Margin for cupcakes sold from 12 PM – 3PM (peak hours) = $4.00. All other times, margin is $3.50 per cupcake. Assume we sell 7 cupcakes a day at peak hours. **Total profit** = (7 units/day) x ($4/unit margin) x (6 days/week x 48 weeks - (7 units/ day x $4.00/unit margin x 10 holidays) + (4 units/day) x ($3.50/unit margin) x (6 days/week x 48 weeks - (4 units/ day x $3.50/unit margin x 10 holidays) = **$11676**	**Assumption:** 7 dozen = 84 cupcakes sold every day at margin of $2.50 per cupcake. **Full cost + target margin** = $1.00 + $2.50 = $3.50 ($42.00 per dozen) **Total profit** = (84 units/day) x ($2.50/unit margin) x (6 days/week x 48 weeks - (84 units/ day x $2.50/unit margin x 10 holidays) = **$58380**	**Assumption:** 120 cupcakes per event x 2 events/week x 48 weeks = 11520 total units **Full cost + target margin** = $1.00 + $1.50 = $2.50 ($30.00 per dozen) **Total profit** = (240 units x ($1.50/unit margin) x 48 weeks = **$17280**	**Assumption:** price per dozen <= $18.00 and 10 dozen delivered weekly per contract. **Covers the cost of first 240 cupcakes every week.** 2 contracts/week x 10 dozen/contract x $18.00/dozen x 48 weeks = $17280.00 total revenue **Unit price** = $18.00/12 units = $1.50/unit **Full cost + target margin** = $1.50 + $0.0 = $1.50 each **Total profit** = 240 units/week x 47 weeks x $0.00 = **$0**
	Net profit = Total Profit – Labor Costs = ($11676 + $58380+ $17280 + $0) – ($10/hr x 3 hrs/day x 6 days/week x 48 weeks) = $87336 - $8640 = **$78696**				

		Sales by Segment			
		Cafe sales to consumers 1 - 11 cupcakes	**Cafe sales to consumers Dozen increments**	**One time sales to caterers > 10 dozen/event**	**Contract sales to restaurants >10 dozen/ week**
Parts 1 & 2	**Target cost suggested pricing**	**Assumption:** 11 single cupcakes sold every day at price of $4.50 per cupcake. **Target cost = Price - target margin** = $4.50 - $0.70 = $3.80 each **Total profit** = (11 units/day) x ($3.50/unit margin) x (6 days/week x 48 weeks - (11 units/ day x $3.50/unit margin x 10 holidays) = **$10703**	**Assumption:** 7 dozen = 84 cupcakes sold every day at margin of $2.50 per cupcake. **Full cost + target margin** = $1.00 + $2.50 = $3.50 ($42.00 per dozen) **Target cost = Price - target margin** = $3.50 - $0.70 = $2.80 each **Total profit** = (84 units/day) x ($2.50/unit margin) x (6 days/week x 48 weeks - (84 units/ day x $2.50/unit margin x 10 holidays) = **$58380**	**Assumption:** 120 cupcakes per event x 2 events/week x 48 weeks = 11520 total units **Full cost + target margin** = $1.00 + $1.50 = $2.50 ($30.00 per dozen) **Target cost = Price - target margin** = $2.50 - $0.70 = $1.80 each **Total profit** = (240 units x ($1.50/unit margin) x 48 weeks = **$17280**	**Assumption:** price per dozen <= $18.00 and 10 dozen delivered weekly per contract. **Covers the cost of first 240 cupcakes every week.** 2 contracts/week x 10 dozen/contract x $18.00/dozen x 48 weeks = $17280.00 total revenue, **Unit price** = $18.00/12 units = $1.50/unit **Full cost + target margin** = $1.50 + $0.0 = $1.50 each **Target cost = Price – target margin** = $1.50 - $0.70 = $0.80 each **Total profit** = 240 units/week x 47 weeks x $0.00 = **$0**
	Net profit = Total Profit – Labor Costs = ($10703 + $58380+ $17280 + $0) – ($10/hr x 3 hrs/day x 6 days/week x 48 weeks) = $86363 - $8640 = **$77723** **Chris wants to earn $35,000/year. If she expects to sell 66 (6x11, individual) + 504 (7x12, consumer dozens) + 240 (2 x10**				

	dozen, caterers) + 240 (2 x 10 dozen, restaurants) = 575 cupcakes weekly x 48 weeks = 50400 cupcakes, then the margin per cupcake >= $35000/50400 = $0.70 per cupcake.				
	Customer Segment	**Cafe sales to consumers 1 - 11 cupcakes**	**Cafe sales to consumers Dozen increments**	**One time sales to caterers > 10 dozen/event**	**Contract sales to restaurants >10 dozen/ week**

Part 3	**Your recommended strategy**	**Peak load pricing**	**Cost-plus pricing**	**Marginal-cost pricing**	**Target-cost Pricing**
	Rationale for your overall recommended price/strategy*	• Small quantities • Premium pricing • Seller is price setter • Can compensate for smaller margins in other customer segments • Cover costs of additional labor	• Inconsistent demand • Difficult to forecast • Still premium pricing (B2C) • Can compensate for smaller margins in other customer segments	• Ability to offer significant discounts for larger orders • No sales personnel required. • Channel demand easily satisfies initial fixed costs. • No contracts in place	• Contracts in place setting price and quantity • Competitive sell with a low price • Regular orders most likely are guaranteed • Buyer is price setter
Part 4	**Where do you expect the highest margin? Why?**	Based on the (conservative calculations above for each pricing strategy) the highest margin dollars should come from the '**Cafe sales to consumers Dozen increments'** segment. This segment represents significant quantity potential at somewhat premium pricing.			

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	Where might you suggest Chris take a lower margin? Why?	Chris should take a lower margin on the '**Contract sales to restaurants >10 dozen/ week'** segment as the customer is the price setter. However, to Chris' benefit, the demand from this channel covers the initially higher (< 240 units) fixed cost.
Part 5	**Should Chris open the cafe? Explain, using projected revenues and profits to support your decision.**	Based on the revenue and margin projects calculated above, Chris should open the café. Using conservative estimates for demand and reasonable market prices, she will easily meet her $35000 yearly profit requirement.