Margin and Markup Exercise  
BUSI 101B

Please complete the problems below on markup and margin. Remember that a markup is taking the cost of the item and increasing it by a percentage of that cost (e.g., marking up an item that costs $100 by 25% would result in a price of $125 ($100*1.25)). A margin is stated as the percentage of a retail price that is above the cost. So, for the same example, if an item’s retail price is $125 and it costs $100, the margin is 20% ((125-100)/125 = 20%)

(1) If the cost of an item is $72 and it has a retail price of $89, what is the margin?  
*Please round your answer to the nearest tenth of a percent* 

\[
\text{Margin} = \frac{\text{Price} - \text{Cost}}{\text{Price}} = \frac{89 - 72}{89} = 19.1\%
\]

(2) For the same example as (1), what is the markup if the price is $89 and the cost is $72?  
*Please round your answer to the nearest tenth of a percent* 

\[
\text{Markup} = \frac{\text{Price} - \text{Cost}}{\text{Cost}} = \frac{89 - 72}{72} = 23.6\%
\]

(3) Bev Smith makes hand-braided mats, at a cost of $40 per mat, to sell at local craft shows. She has 30 mats on hand for the next show, and expects to sell them all for a total of $1,800. What is Bev’s markup per mat in dollar and percentage terms? 
*Please round your answer to the nearest tenth of a percent* 

Retail Price = $1800/30 units = $60/unit  
Cost = $40/unit  
Bev’s Markup = (Price - Cost)/Cost = (60 - 40)/40 = 50.0%  
Bev’s $ Markup = Price - Cost = $20

(4) A convenience store buys 1-gallon jugs of milk for $2.99 and sells them for $4.29. What is the margin they earn on the milk?  
*Please round your answer to the nearest tenth of a percent.*

Retail Price = $4.29/unit  
Cost = $2.99/unit  
Margin = (Price - Cost)/Price = (4.29 – 2.99)/4.29 = 30.3%
(5) Suzie’s Flowers purchases a wide variety of houseplants. One of Suzie’s favorites, the large split leaf philodendron, costs $13.50 from the wholesaler and requires an additional $1.00 per plant to take care of and then package prior to sale. Suzie’s normal markup on houseplants is 55%. What would be the retail selling price of a large split leaf philodendron? **Fully support your answers mathematically.**

Wholesale Cost = $13.50/unit
Retail Price = (Cost + $1 maintenance) * (1+Markup %) = ($13.50 + 1) * 1.55 = $22.48

(6) A manufacturer sells a 3-person tent to its wholesalers for $59.95. Wholesalers take a markup on selling price of 15% and sell to retailers who take a markup on selling price of 45%. How much does this tent cost you?

*Please round your answers to the nearest cent before continuing.*

Cost = $59.95/unit
Wholesale Price = Cost * (1+Markup %) = $59.95*1.15 = $68.94
Retail Price = Wholesale Price * (1+Markup %) = $68.94*1.45 = $99.96
The tent would cost me $99.96.

(7) An analysis of the competition suggests the average retail selling price of an electronic game is $89. The owner of a computer accessories store has a chance to purchase 5 dozen of these games at a delivered cost of $55 per unit. Her normal margin on electronic games is 35%. Should she make the purchase? Why? Why not?

**Fully support your answers mathematically.**

Retail Price = $89/unit
Cost = $55/unit
Margin = (Price - Cost)/Price = (89 - 55)/89 = 38.2%

If she continues to have a margin of 35%, then Price = Cost/(1 – Margin %) = 55/(1-0.35) = $84.62. If she wishes to round it to a whole number, she can still make her 35% margin and charge less than the competitors. Or, if she charges 89, she will have a higher margin of 38.2%, so I recommend she does it as she should be able to sell the games (assuming a demand of 60 units isn’t too many to sell).
(8) An auto parts manufacturer sells fan belts to its distributors for $10.95. Typical distributor markups are 20% and typical gas station markups are 40%. How much would you have to pay for a fan belt? Please round your answers to the nearest cent before continuing.

Cost = $10.95/unit
Distributor Price = Cost * (1+Markup %) = $10.95 * 1.20 = $13.14
Gas Station Retail Price = Distributor Price * (1+Markup %) = $13.14 * 1.4 = $18.40
A fan belt would cost me $18.40.

(9) The ABC Corporation has the following financials to report: Net Sales $55,400
- Gross Profit $23,500
- Operating Profit $11,200
- Net Profit $6,700

Calculate both the firm’s Operating Margin and Gross Margin. Please round your answer to the nearest tenth of a percent.

Operating Margin = Operating Profit/Net Sales = 11,200/55,400 = 20.2%

Gross Margin = Gross Profit/Net Sales = 23,500/55,400 = 42.4%

(10) At Bovine Industries, last year they had net sales of $25,300, gross profit of $21,400, operating profit of $13,800, and net profit of $9,300.

Calculate both the firm’s Net Margin and Operating Margin. Please round your answer to the nearest tenth of a percent.

Net Margin = Net Profit/Net Sales = 9,300/25,300 = 36.8%

Operating Margin = Operation Profit/Net Sales = 13,800/25,300 = 54.5%