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Week 1 Quiz

Lucietta Lee is a first year student at Columbia University. She is looking for an apartment. After an extensive search she narrowed down her choice to three apartments. However, choosing among the three apartments was becoming a difficult task. Therefore she decided to be a bit more "scientific" about her selection procedure. She considers rent, distance from school, cleanliness, and neighborhood as four important attributes in her selection. Given below are the importance weights Lucietta attaches to each of these four attributes and her ratings on a 1-10 scale (1 = worst, 10 = best) for three apartments she is considering.

	Rent	Distance from School	Cleanliness	Neighborhood
Importance Weight	0.40	0.30	0.20	0.10
Apartment A	10	3	4	2
Apartment B	5	8	8	6
Apartment C	7	6	10	2

Question 1

1/1 point (graded)
Which attribute matters the most for Lucietta when choosing an apartment to rent?

- ⦿ Rent amount ✔
- ○ Distance from school
- ○ Cleanliness

○ Neighborhood

Explanation

Rent amount is the attribute with the highest importance weight (0.4).

Submit	You have used 1 of 1 attempt

❶ Answers are displayed within the problem

Question 2

1/1 point (graded)

Consider Apartment A. Suppose we can improve Lucietta's perceived rating of only one of the three attributes (Distance, Cleanliness, or Neighborhood) by one point. Which attribute would you recommend for improvement?

⦿ Distance from school ✔

○ Cleanliness

○ Neighborhood

Explanation

Distance from school is the attribute with the highest importance that can be improved. This is, the benefit of one point increase on Distance is 0.3*1=0.3; for Cleanliness is 0.2*1=0.2; and for Neighborhood is 0.1*1=0.1. Thus, the right answer is Distance from School.

Submit	You have used 2 of 2 attempts

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Question 3

1/1 point (graded)

What is Luciatta's overall evaluation (preference) of Apartment A?

⊙ 5.9 ✔

○ 6.6

○ 6.8

○ 7.2

Explanation
Preference for a specific apartment is constructed by multiplying Lucietta's importance weights for each of the apartment attributes (rent, distance from school, cleanliness, and neighborhood), by her perceived ratings of the attributes for that apartment.
Preference for Apartment A = 0.4*10+0.3*3+0.2*4+0.1*2 = 5.9
Preference for Apartment B = 0.4*5+0.3*8+0.2*8+0.1*6 = 6.6
Preference for Apartment C = 0.4*7+0.3*6+0.2*10+0.1*2 = 6.8

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Question 4

1/1 point (graded)
Which Apartment Lucietta is most likely to choose?

○ A

○ B

⊙ C ✔

○ None

Explanation
According to the attitude model, Lucietta should pick the apartment with the highest rating – C in this case.

Submit   You have used 1 of 1 attempt

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Brita introduced a new faucet mount filtering system. In order to use the filters, the customer needs to first install a faucet mount. The faucet mount costs $40 dollars and can last many years. The faucet filter needs to be replaced every 100 gallons of water. The existing technology at the time the product was introduced was the pitcher system. In order to use the pitcher system, the customer had to buy a pitcher which costs $20 and can last five years. Additionally, each pitcher filter costs $5 and can process 40 gallons of water before it needs to be replaced. The average household filters 200 gallons of drinking water per year in 5 years. Use EVC analysis to help Brita define the maximal price for the new faucet filter.

Question 5

1/1 point (graded)
What is the nature of Brita's innovation?

○   Reduced the cost of the water filter

◉   Reduced the number of times changing the filter ✔

○   Produced a cheaper faucet

○   All the above

Submit   You have used 1 of 1 attempt

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❶   Answers are displayed within the problem

Question 6

1/1 point (graded)
What is (are) the consumer benefit(s) from Brita's innovation?

○ No need for a pitcher

○ Less time wasted replacing filters

○ Better value

◉ All of the above ✔

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❶ Answers are displayed within the problem

Question 7

1/1 point (graded)
What is life cycle cost (over five years) for using the pitcher system?

○ $45

○ $105

◉ $145 ✔

○ $175

Explanation
Cost of existing solution over 5 years:
Cost of pitcher + cost of filters
$20 + ($5 * # of filters needed)
$20 + ($5 * (200 * 5 / 40))
$20 + $125 / $145

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ℹ️ Answers are displayed within the problem

Question 8

1/1 point (graded)

What is life cycle cost (over five years) for using the new faucet mount filtering system if Brita charges $8 per faucet filter?

- ◯ $50

- ◯ $105

- ⦿ $120 ✔

- ◯ $145

Explanation

The faucet filter needs to be replaced every 100 gallons of water. The average household filters 200 gallons of drinking water per year. Thus, they need 2 filters per year, which is 10 filters over 5 years.

Cost of faucet mount + Cost of faucet filters

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ℹ️ Answers are displayed within the problem

Question 9

1/1 point (graded)

What is the maximum price Brita can charge for the new faucet filter?

- ◯ $5

- ◯ $8

- ⦿ $10.5 ✔

○ $12

Submit   You have used 1 of 1 attempt

ℹ Answers are displayed within the problem

Question 10

1/1 point (graded)
What are the issues of Economic Value to Customer (EVC) analysis?

○ Ignores qualitative benefits to customers

○ Hard to convince customers about EVC

○ EVC varies across customers

◉ All of the above ✔

Submit   You have used 1 of 1 attempt

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