1 point

1. Recommending items based on **global popularity** can (*check all that apply*):

- [ ] **provide personalization**
- [ ] **capture context (e.g., time of day)**
- [x] **none of the above**

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1 point

2. Recommending items using a **classification** approach can (*check all that apply*):

- [x] **provide personalization**
- [x] **capture context (e.g., time of day)**
- [ ] **none of the above**

---

1 point

3. Recommending items using a **simple count based co-occurrence matrix** can (*check all that apply*):

- [x] **provide personalization**
- [ ] **capture context (e.g., time of day)**
- [ ] **none of the above**

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1 point

4. Recommending items using **featurized matrix factorization** can (*check all that apply*):

- [x] **provide personalization**
- [x] **capture context (e.g., time of day)**
- [ ] **none of the above**

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1 point

5. Normalizing co-occurrence matrices is used primarily to account for:

- ( ) **people who purchased many items**
- (•) **items purchased by many people**
- ( ) **eliminating rare products**
- ( ) **none of the above**

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1 point

6. A store has 3 customers and 3 products. Below are the learned feature vectors for each user and product. Based on this estimated model, which product would you recommend most highly to *User #2*?

User ID	Feature vector
1	(1.73, 0.01, 5.22)
2	(0.03, 4.41, 2.05)
3	(1.13, 0.89, 3.76)

Product ID	Feature vector
1	(3.29, 3.44, 3.67)
2	(0.82, 9.71, 3.88)
3	(8.34, 1.72, 0.02)

- ( ) **Product #1**
- (•) **Product #2**
- ( ) **Product #3**

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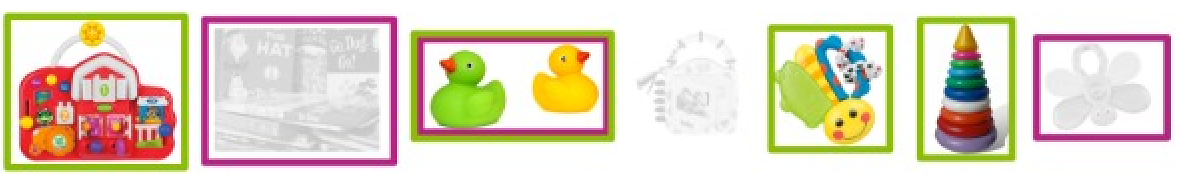
1 point

7. For the liked and recommended items displayed below, calculate the **recall** and round to 2 decimal points. (*As in the lesson, green squares indicate recommended items, magenta squares are liked items. Items not recommended are grayed out for clarity.*) Note: enter your answer in American decimal format (e.g. enter 0.98, not 0,98)



0.33

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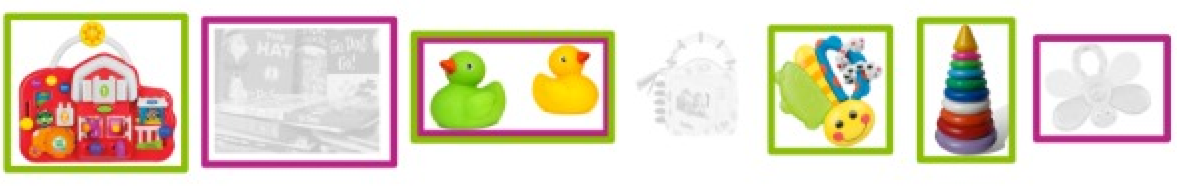
1 point

8. For the liked and recommended items displayed below, calculate the **precision** and round to 2 decimal points. (*As in the lesson, green squares indicate recommended items, magenta squares are liked items. Items not recommended are grayed out for clarity.*) Note: enter your answer in American decimal format (e.g. enter 0.98, not 0,98)



0.25

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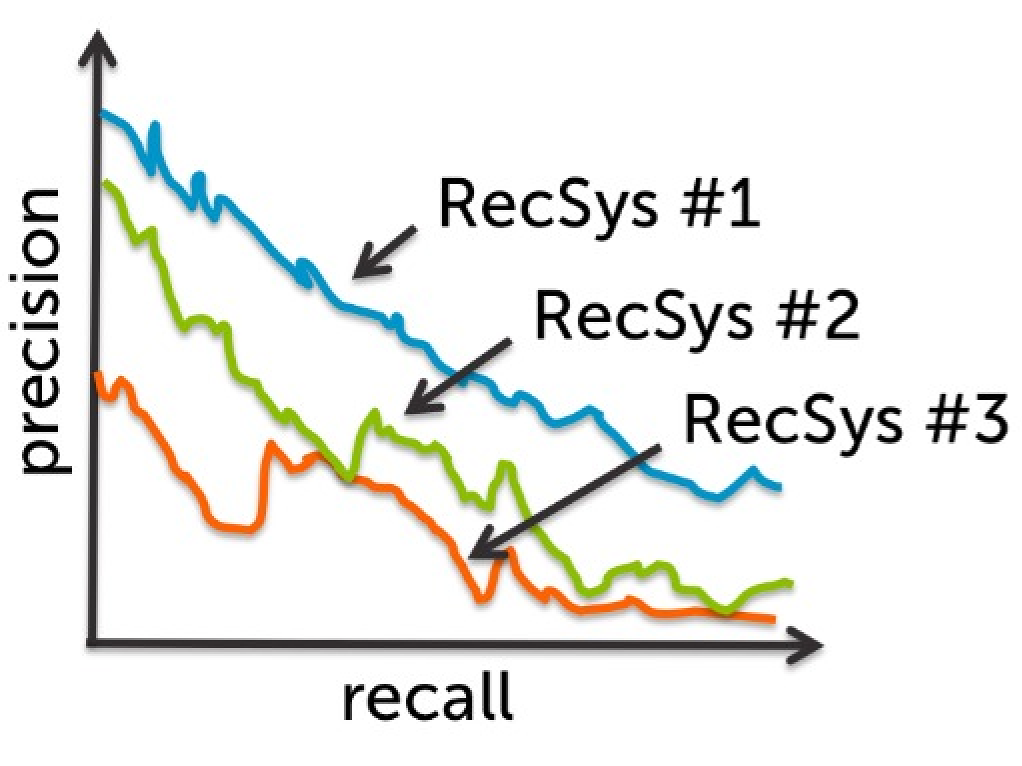
1 point

9. Based on the precision-recall curves in the figure below, which recommender would you use?



- (•) **RecSys #1**
- ( ) **RecSys #2**
- ( ) **RecSys #3**