



Sorting Data vs. Learning Patterns

Computers can be powerful tools, but not everything a computer does is considered Artificial Intelligence (AI). Some tasks are very straightforward: the computer simply follows instructions step by step. This is called **data processing**. For example, a computer can alphabetize a list of names, add numbers together, or sort grades from highest to lowest. These tasks are useful, but the computer is not really "learning"-it is just applying clear rules.

AI, on the other hand, involves finding patterns in data and making predictions. Instead of being told exactly what to do, the computer studies examples and uses them to guess what might happen next. For instance, a music app can recommend songs you might enjoy based on what you've already listened to, or a traffic app can warn you about delays by learning from past traffic patterns. These predictions improve over time as the AI works with more data.

The important difference is this: **data processing is about following rules, while AI prediction is about learning from data and making educated guesses.**

Directions - Read each scenario below. Decide if it is **Data Processing** or **AI Prediction**. Write your answer in the blank.

1. A school computer program puts all the students' grades in order from highest to lowest.
→ _____
2. A music app suggests a playlist of songs because they are similar to the ones you listen to most. → _____
3. A store's cash register adds up the total price of the items you bought. → _____
4. An online store recommends winter jackets to people who often buy cold-weather clothing. → _____
5. A library catalog system lists all the books by title, author, or subject. → _____
6. A movie app shows "Because you watched Frozen..." and suggests similar animated films.
→ _____
7. A teacher enters attendance, and the system automatically counts how many students are absent. → _____
8. A health app looks at your steps, sleep, and heart rate, then predicts if you might be tired tomorrow. → _____
9. A train schedule app lists all the trains running today by time and destination. → _____
10. A traffic app studies patterns of past traffic and warns that your drive will take longer than usual. → _____