TIP: There are two exercises here, all on the same topic. I would space out when you do each exercise, rather than doing both in one sitting immediately after learning the concepts in class, or both in one sitting immediately prior to the exam. The keys for both exercises are on p. 2. Please come to office hours to ask questions about these examples.

Instructions for all exercises:

Identify whether each conclusion is for a correlational study or an experimental study.

Exercise A

1. Being in a more positive mood causes people to be more financially generous.
2. Drinking alcohol in a social setting leads people to feel more drunk than drinking alcohol alone.
3. Eating at least 5 cups of vegetables and fruits per day decreases cancer risk.
4. Eating chocolate after dark is positively related to how late people stay up.
5. Exercising more frequently is associated with lower heart rate.

Exercise B

1. Extroverts are more likely to own dogs than introverts.
2. Feeling angry causes people to be more likely to interpret an ambiguous color as red than not feeling angry.
3. Feeling physically cold leads people to feel more lonely.
4. Increasing your daily exercise decreases stress.
5. People who take vitamin supplements get colds less often than those who do not take such supplements.

**Key for Exercise A**

1. Being in a more positive mood causes people to be more financially generous. **Experimental – the hypothesis mentions *cause.* Mood is the potential cause (IV) and financial generosity the potential effect (DV).**
2. Drinking alcohol in a social setting leads people to feel more drunk than drinking alcohol alone. **Experimental – *lead to* implies the first causes the second. Type of setting is the potential cause (IV) and how drunk you feel is the potential effect (DV).**
3. Eating at least 5 cups of vegetables and fruits per day decreases cancer risk. **Experimental – *will decrease* implies cause and effect. Whether or not you eat your 5 cups is the potential cause (IV), which may cause a change in cancer risk, the potential effect (DV).**
4. Eating chocolate after dark is positively related to how late people stay up. **Correlational – *positively related* implies the variables will be related but it does not state which variable might be the cause and which the effect.**
5. Exercising more frequently is associated with lower heart rate. **Correlational – *associated with* implies a relationship but it does not specifically state which variable will be the cause and which variable will be the effect.**

**Key for Exercise B**

1. Extroverts are more likely to own dogs than introverts. **Correlational – *being more likely* does not say that one variable causes the other.**
2. Feeling angry causes people to be more likely to interpret an ambiguous color as red than not feeling angry. **Experimental – use of the phrase *will cause*** **here gives it away. Whether or not you feel angry is the predicted cause (IV), and how you interpret an ambiguous color is the predicted effect of how you feel (DV).**
3. Feeling physically cold leads people to feel more lonely. **Experimental – *will lead to* implies that feeling physically cold would come first and be the cause (IV), and that this feeling would have an effect on feelings of loneliness (DV).**
4. Increasing your daily exercise decreases stress. **Experimental – Amount of daily exercise is the cause (IV), and this study will examine how it affects stress level (DV).**
5. People who take vitamin supplements get colds less often than those who do not take such supplements. **Correlational – *will also* implies that the two variables are related (as one goes up, the other goes down in this case), but doesn’t specifically state that the supplements will be the *cause of* fewer colds.**