4. A child swings on a swing

- Minimum height doesn't change
- Max height increases the more you swing
5. A child climbs up a slide and then slides down.

Climb at a **steady speed**
Stop at the top (speed $\to$ zero)
Go down the slide (speed increases)
Approach the bottom (speed $\to$ zero)
A wagon moves along then crashes into a wall and stops.

Steady speed followed by stops instantly (hits the wall)
We climbed a hill and then sledged down it.

- **a)** Speed vs. Time Elapsed: Decreasing speed as time passes.
- **b)** Speed vs. Time Elapsed: Peak speed reached, then decreases.
- **c)** Speed vs. Time Elapsed: Speed increases, reaches a peak, then decreases.
- **d)** Speed vs. Time Elapsed: Speed increases, reaches a peak, then decreases, reaching zero speed.

**Climb the hill at a steady speed.**
**Stop at the top (speed -> 0).**
**Sled down the hill (speed increasing).**
**Reach the bottom (speed -> 0).**
You are babysitting and earn $4 an hour. Which of the following graphs shows how the amount you earn is related to the number of hours you work?

You can earn $4 for each hour worked. For example:
- 0 hours = $0
- 1 hour = $4
- 2 hours = $8

and so on...
Match each of the following seven scenarios with the most appropriate graph given. As you look at each graph from left to right, remember that time is advancing.

1. We rode the roller coaster steadily to the top, then went faster and faster as we went down the other side. The speed of the roller coaster is the dependent variable of the graph, that is, the variable on the vertical axis.

2. The kettle heats before the corn begins to pop. The corn starts to pop and continues popping until almost all the corn has popped. The amount of unpopped corn in the kettle is the dependent variable.

3. A balloon was blown up in class and then let go. It flew around the room. The amount of air in the balloon is the dependent variable.

4. At the beginning of spring, the grass grew slowly and I seldom had to mow the lawn. By midsummer it was really growing, so I mowed twice a week. In fall, I only mow once in a while. The number of lawn mowings to dates is the dependent variable.

5. I turned the oven on. When it was hot, I put in the cake. The cake baked for about thirty minutes. I turned the oven off and removed the cake. The oven temperature is the dependent variable.

6. We bought a pair of rabbits last year. They have had several litters, and we have so many rabbits that the pens are full. If more are born, we will have to give some away or find room for the new ones. The number of rabbits is the dependent variable.

7. I put water in the ice-cube tray and placed it in the freezer. The temperature of the water in the ice-cube tray is the dependent variable.
Homework

From the handout:
- Matching
- #s 2, 4, 5 & 9