

Motion & Graphing Understanding Check QUIZ

1. From memory, write down the **magic triangle** for calculating **speed, distance & time**.
2. What is the **formula** for **acceleration**?
3. What is **acceleration**? Give **3 examples** of objects that are accelerating.
4. Calculate the following **acceleration** problems:
 - a. A train leaves a station at exactly **5:00 AM** and reaches a speed of **120 km/h** at exactly **5:02 AM**.
 - b. A plane touches down on a runway traveling at **210 km/h** and slows down to a complete stop **30 seconds** later.
5. What is **different** about the two acceleration problems above? What does the **negative** tell you about the velocity or speed?
6. What is the **slope** of a **horizontal (flat) line** on a **distance vs. time** graph? Describe what the object is doing.

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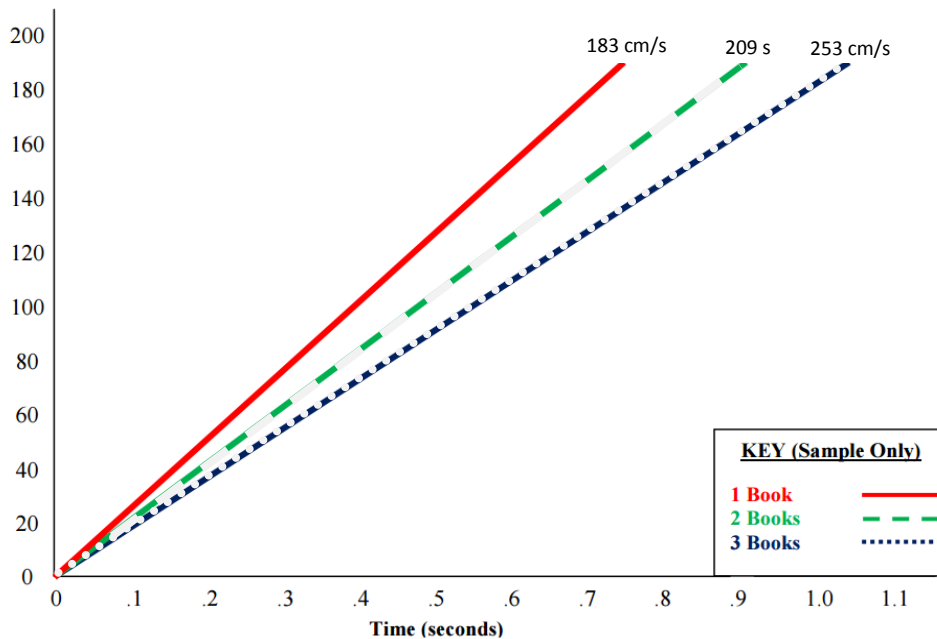
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7. What is the **slope** of a **horizontal (flat) line** on a **speed vs. time** graph?
Describe what the object is doing (**hint**: there are 2 possibilities).

8. What would be a **good title** for a graph that shows an objects **speed**?

9. **How fast** would an object be going if it accelerated at **10m/s²** for **5 seconds**?

10. What is wrong (**list all things wrong or missing**) with the following graph?



REQUIRED BONUS: What makes roller coaster rides fun? Explain your reasoning and give an example that **supports your claim**.

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