Acceleration Practice

Calculation questions:

***Skill Builder Basic Steps to Problem Solving***

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| ***1) Identify the problem*** | *1) Underline the question.* |
| ***2) Define the problem*** | *2) Write down the variable you need to find. This is your unknown variable.*  *Examples: t = ? vf = ?*  *3) Write down the units for this variable.*  *4) Does this variable have a direction? If so, make yourself a note.* |
| ***3) Examine the options*** | *5) In the question, circle the numbers with their units AND direction.*  *6) Write these numbers down with their corresponding variable.*  *Examples: di = 2.5m and t = 5.0s*  *7) On your equation sheet, locate and write down a formula that includes the variables you listed in #6 and the unknown variable in #2.* |
| ***4) Act on a plan*** | *8) Substitute in the values for the variables you listed in #6 to find your unknown variable from #2. Solve for your unknown variable.* |

**Let's try one together!**

Tyson was moving at +3.5m/s. After 6.0s, he was moving at +7.0m/s. What was his acceleration?

Billy accelerated from rest at +4.5m/s for 2.0s. What was his final velocity?

A ball was dropped and hit the ground at 6.6m/s. How long did it drop for? (Hint: what acceleration is acting on the ball?)

\*Saya was traveling at +10.5m/s. Suddenly, she hit the brakes and came to a stop after 3.0s. What was her acceleration?

\*\*While backing his car, Ethan was traveling backwards at 3.0m/s. He suddenly hits the gas pedal and accelerates forward at 1.75m/s. How long does it take Ethan to reach vf = +1.0m/s?