Acceleration Problems II

Physical Science and Technology

Use your own piece of paper to complete these problems. Please show the Five Steps for every problem.

1. A gigantic rat is running along the street with an initial velocity of 7.2 m/s. If it accelerates at a rate of 4.2 m/s^2 for 11.5 s, what will its final velocity be?

2. A skinny turkey is plummeting from the top of Mary's Peak. When it lands, its final velocity is 752.1 m/s. If it fell for 31.5 seconds, and it accelerated at 9.8 m/s^2, what was its initial velocity?

3. A small stripey cat named Nacho is crawling along the top of Aaron's skull. When it first starts crawling, it is traveling at 0.05 m/s (initial velocity). It accelerates at 0.01 m/s^2 until it is traveling at 0.12 m/s (final velocity). For how much time did it accelerate?

4. A big piece of chicken is thrown across the road. Before it is thrown, it is motionless (its velocity is 0 m/s). When it lands on the other side of the road, its velocity is 5.6 m/s. If it was in the air for 7.5 seconds, what was its acceleration?

5. A ferocious dog named Riley is chasing a pigeon down the street. If Riley starts running at 4.8 m/s and over a time of 11.5 seconds accelerates at 1.14 m/s^2, what will her final velocity be?