## Rifle Shots-Time to Hit Ground ${ }^{47}$

The six figures below show rifles that are being fired horizontally, i.e., straight out, off platforms. The bullets fired from the rifles are all identical, but the rifles propel the bullets at different speeds. The specific speed of each bullet and the height of each platform are given. All of the bullets miss the targets and hit the ground.

Rank these bullets, from longest to shortest, on the basis of how long it takes a bullet to hit the ground. That is, put first the bullet that will take the longest time from being fired to hitting the ground, and put last the bullet that will take the shortest time.


Longest 1 $\qquad$ 2 $\qquad$ 3 $\qquad$ 4 $\qquad$ 5 $\qquad$ 6 $\qquad$ Shortest

Or, all of the bullets reach the ground at the same. $\qquad$
Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

| Basically Guessed |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | Sure |  |  | Very Sure |
| 1 |  |  |  |  |  |  |  |  |

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[^0]:    ${ }^{47}$ D. Maloney
    Ranking Task Exercises in Physics: Student Edition 47

