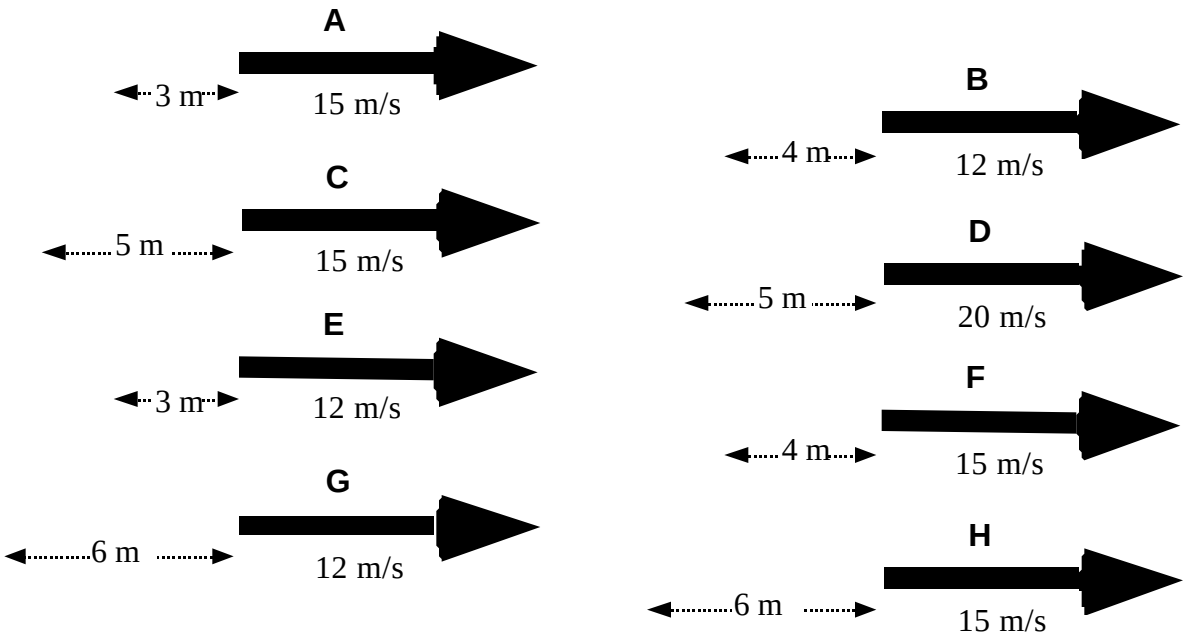
Horizontal Arrows at Different Distances—Force [41]

The figures below show arrows that have been shot from bows. All of the arrows are identical, and they are moving horizontally to the right. The arrows are at different points in their paths from the bows to the targets. The distances the arrows have traveled in reaching the points shown are given in the figures. Also given in the figures are the speeds the arrows have at the points shown.

Rank these situations, from greatest to least, on the basis of the rightward pointing force, i.e., the force acting in the direction the arrow is moving, acting on each arrow at the point shown. That is, put first the arrow with the largest horizontal force acting on it, and put last the arrow with the smallest horizontal force. (A force is a push or pull.) We are ignoring any effects of air in these situations.



Greatest Force 1____2_____3_____4_____5_____6_____7_____8_____Least Force

Or, all of these arrows have the same horizontal force acting upon them. _____

If you check this answer, what is your estimate of the strength of the force? _____ Please carefully explain your reasoning.

How sure were you of the reasoning you used? (circle one)

Basically Guessed					Sure				Very Sure
1	2	3	4	5	6	7	8	9	10

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