

0 Question: Someone lies on the floor with an anvil on their chest. Someone else hits the anvil with a sledgehammer. The anvil shields the first person from most of the sledgehammer's:
a) momentum
b) kinetic energy
c) both
d) neither

A1: Both

A2: If we interpret "shields from most of X" to mean, "prevents the transmission of the sledgehammer's quantity of X, or less, into the person", then the answer is B, kinetic energy.

Arguments for A1

1 Question: Does having the anvil result in the person not absorbing most of the kinetic energy?

A1: Yes, probability 90%

A2: What's relevant isn't whether the body "absorbs" the kinetic energy, it's about whether it's transmitted to the person at all. The phrase "shields the person from X" would be strange if what was meant was "enables X to pass through the person more easily". (92%)

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5 Question: If the anvil hadn't been there, would the person have absorbed most of the kinetic energy?

A1: Yes, probability 80%

A2: What's relevant isn't whether the body "absorbs" the kinetic energy, it's about whether it's transmitted to the person at all. The phrase "shields the person from X" would be strange if what was meant was "enables X to pass through the person more easily". (92%)

7 Question: If the anvil hadn't been there, would the person have absorbed most of the momentum?

A2: What's relevant isn't whether the body "absorbs" the kinetic

Arguments for A2

2 Question: Is momentum communicated to the person through the anvil?

A1: Yes, but then it's immediately passed onto the ground, , probability 90%

A2: Yes, and possibly more than the original momentum of the sledgehammer if the sledgehammer bounces off. (96%)

3 Question: Is kinetic energy communicated to the person through the anvil?

A1: No, probability 90%

A2: No, because the anvil is (presumably) so massive that if it has only a small speed (to match the sledgehammer's communication of momentum) this will amount to very little energy. (92%)

A1: Yes, probability 80%

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6 Question: Meta-debate: Given the questions and answers in this round, which is the better answer to the question?

A1: Both

A2: If we interpret "shields from most of X" to mean, "prevents the transmission of the sledgehammer's quantity of X, or less, into the person", then the answer is B, kinetic energy.