

[Judge View](#) [Tree View](#)[List of Debates](#)[Hide notes](#)Side: None Phase: **Make Recursion Payments** Remaining: < -1:00:00


At root

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:

Q a) momentum  
(H) b) kinetic energy  
c) both  
d) neither

H 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.

D Both


Notes 

Q Is momentum communicated to the person through the anvil?

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

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

2 Payment: H ☐ D ☐ None ☒ Recurse

Notes 


Q Is kinetic energy communicated to the person through the anvil?

Q Does having the anvil result in the person not absorbing most of the kinetic energy?

H 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". (90%)

D Yes, probability 90%

1 Payment: H ☐ D ☐ None ☒ Recurse

Notes 

Q Does having the anvil result in the person not absorbing most of the momentum?

H

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 (000)

D

No, probability 90%

3

Payment: H ☐ D ☐ None ☒ Recurse

Notes

I don't believe my answer here changes depending on the elasticity or inelasticity assumption of the problem. If the collision is perfectly inelastic then all of the energy dissipates so none is communicated to the anvil. If it's perfectly elastic the sledgehammer bounces right off the anvil, taking all of the kinetic energy with it.

H

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 (000)"

D

Yes, probability 90%

4

Payment: H ☐ D ☐ None ☒ Recurse

Notes

By absorbing I mean their body would end up with that extra momentum; the momentum wouldn't be passed on by the person to the ground.

Q

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

H

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 (000)"

D

Yes, probability 80%

5

Payment: H ☐ D ☐ None ☒ Recurse

Notes

Q

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

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".

H

D Yes, probability 80%

7 Payment: H ☐ D ☐ None ☒ Recurse

Notes

By absorbing I mean their body would end up with that extra momentum; the momentum wouldn't be passed on by the person to the ground.

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

H

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

D Both

6 Payment: H ☒ D ☐ None ☐ Recurse

Notes