

Re: How to split (or combine) magnetic force?

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On Dec 7, 3:25 am, Bert Harleman <b...@xxxxxxxxxxxx> wrote:

There's a science quiz with the following question:

With a bar-magnet you can lift 1 kilo of steel.
Then you split the magnet in two exact halves.
How much can you lift at best with each of the two smaller bars?

- A. about 1 kilo
- B. about 3/4 of a kilo
- C. a bit more than 1/2 a kilo

I searched the internet for a good explanation, but without success.
I found webpages that mentioned that you cannot simply add (or split) these forces.
I also found lots of formulas but I don't know how to apply them on this situation.

Anyone can give me a hand?

Bert

One or half Kg. This depends on how you split the magnet. If it is cut across the B lines then total flux for each remains same. If it is cut along the direction of B lines then total flux of each is halved and so also the force.