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Q: Finding a weak form of the divergence theorem Let  $\Omega$  be a bounded domain in  $\mathbb{R}^n$ . The divergence theorem states that the divergence of a vector field  $S$  is given by  $\int_{\Omega} \text{div} u - \text{tr}(d)V = \int_{\partial\Omega} u \cdot \text{tr}(d)S$ . Can we weaken the domain and the vector field somewhat to obtain a (weak) form of the divergence theorem? Specifically, if we take  $\Omega$  to be a bounded domain in  $\mathbb{R}^n$  with smooth boundary and  $S$  to be any smooth vector field, we can prove that the divergence of  $S$  is given by  $\int_{\partial\Omega} \langle \text{grad} u, \nu \rangle \text{tr}(d)S = \int_{\Omega} \text{div} u - \text{tr}(d)V$ . To get a divergence theorem, we should get rid of the integrals over  $\partial\Omega$ . Is this possible? What about other theorems in the same vein? A: This is not possible: the weak formulation of the divergence theorem has the form  $\int_{\Omega} \langle \text{operatorname{div}} u, \varphi \rangle = \int_{\partial\Omega} u \cdot \nu \langle \varphi, \nu \rangle$ , where the divergence on the right-hand side is taken in the sense of distributions. By the Riesz representation theorem, this holds if and only if  $\text{operatorname{div}} u$  is  $L^1$  and  $u \cdot \nu$  is  $L^1$ . That  $\text{operatorname{div}} u$  is  $L^1$  follows from Hodge's theorem, but in general it is not known that  $u \cdot \nu$  is  $L^1$ . Q: How to Find Closest element using jQuery Given an array of objects that look like this: var objects = [ { 'x

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When people talk about the happiness factor of rural lifestyle and the conveniences that the city offers, there are many who respond that they can barely imagine living in the city. In today's world, everyone is busy with their office work and other activities, and the people are fast losing their connection with nature. After all, the city is what all of us are living in, isn't it? The city is where our work, studies, and all other activities happen, and the internet too has become a vital part of the city. We spend most of our time at the desk, and we barely have time to go out and enjoy nature. But, the city is slowly changing. Today, it is possible to play online games from the comfort of your living room and even see a movie without leaving the house. The internet has evolved and we are now able to stream movies and watch sports without spending time and money at a local cinema. Streaming video has also made it possible for people to watch movies and videos on their mobile phone and tablets, and those with satellite connections can watch them even from their cars. And the most important advantage of watching movies and videos from the comfort of your home is that you are able to have some privacy. For this reason, many people now prefer to watch videos online. There are many sites on the internet that offer free movies to stream online. Many free sites even offer high-quality HD movies for free. If you have an internet connection, there is no need to worry about the quality of the video, and you can download or stream the movies for free. The internet has become a great source of entertainment. And this is why many people are streaming videos from various sites and watching them on their desktop or laptop computer. There are many sites on the internet that offer movies and videos in high quality. But, watching high-quality videos takes a lot of time and money. And many do not have a high-speed internet connection at home. If you can't afford to pay for an HD-quality connection at home, then you can easily watch free videos online with HD quality. HD online player: the benefits of the new technology HD online player is a video player that allows you to watch videos on the internet and watch them on your PC, laptop, or laptop. The best way to watch movies and videos is with the help of the internet and a video player. You can also use 2d92ce491b