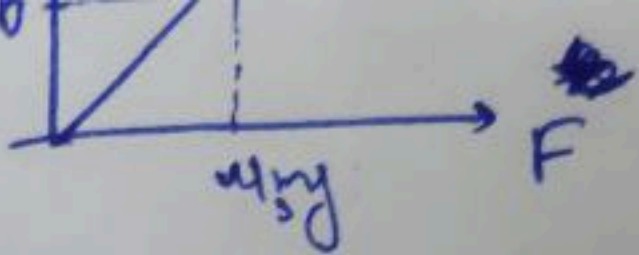


**5.21** A block placed on a rough horizontal surface is pulled by a horizontal force  $F$ . Let  $f$  be the force applied by the rough surface on the block. Plot a graph of  $f$  versus  $F$ .



5.33

As we know soft muddy ~~floor~~ <sup>ground</sup> will have resiliency and hard floor is rigid.

So, as we fell on soft ground it will absorb some of energy by remoulding and time of impact will be more. But on hard floor it will not remould and sudden change in momentum of girl.

So, she will feel more pain on hard floor than muddy ground when ~~fall~~ hit.