

Exercise

Vector in Real Life I Part I

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Vector in Real Life I Part I

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<http://ocw.ump.edu.my/course/view.php?id=464>

3.3.1 Newton's Law (1st , 2nd and 3rd)

John doing experiment and found that a resultant force of 12 N will moved a pills storage box with acceleration of 4 m/s². Calculate the mass of the pills storage box?

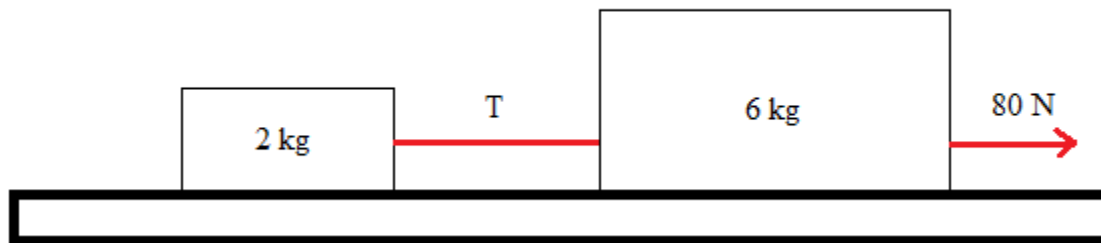


Vector in Real Life I Part I **Ans : 3 kg**
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3.3.1 Newton's Law (1st , 2nd and 3rd)

There are two blocks connected with a string as shown in the diagram. Find the acceleration of the blocks? Determine the tension in the string? Assume no friction.



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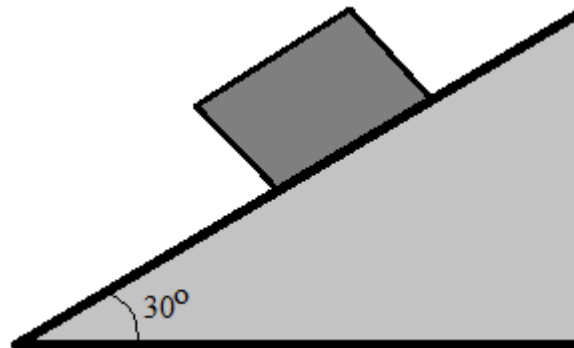
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Ans: 10 m/s^2 , 20 N

3.3.1 Newton's Law (1st , 2nd and 3rd)

A block of wood slides downward the 30° frictionless inclined plane as shown in diagram. Calculate the acceleration of the wood.



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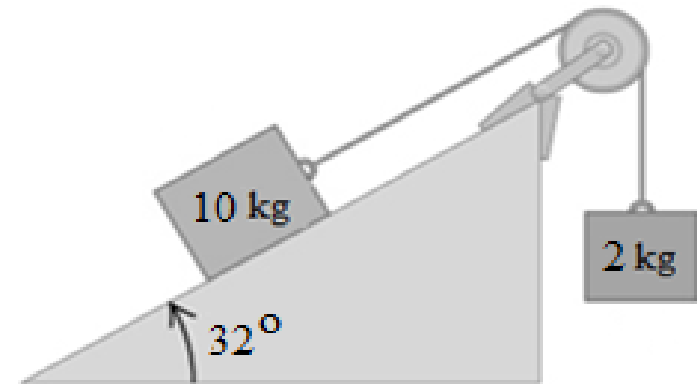
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Ans : 4.9 m/s^2
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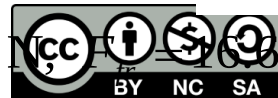
3.3.1 Newton's Law (1st , 2nd and 3rd)

10.0 kg block is connected to 2 kg block as shown in diagram. Assume $\mu_k = 0.2$.

- Determine the normal force
- Find the kinetic friction between the block and surface of the incline plane
- Calculate the acceleration of the block
- Find the tension in cable



Ans : $F_N = 83.1 \text{ N}$



vector in real life
N, $a = 1.32 \text{ m/s}^2$, $T = 22.2 \text{ N}$
<http://ocw.ump.edu.my/course/view.php?id=464>