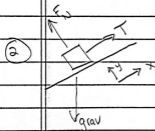


(2)

	<table border="0"> <thead> <tr> <th style="text-align: left;">force</th> <th style="text-align: center;">x</th> <th style="text-align: center;">y</th> </tr> </thead> <tbody> <tr> <td>grav</td> <td style="text-align: center;">0</td> <td style="text-align: center;">$-m_A g$</td> </tr> <tr> <td>normal</td> <td style="text-align: center;">0</td> <td style="text-align: center;">$+F_{NA}$</td> </tr> <tr> <td>rope</td> <td style="text-align: center;">$-T$</td> <td style="text-align: center;">0</td> </tr> <tr> <td>physicist</td> <td style="text-align: center;">$+P$</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>	force	x	y	grav	0	$-m_A g$	normal	0	$+F_{NA}$	rope	$-T$	0	physicist	$+P$	0
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physicist	$+P$	0														
	$+m_A a_x \quad m_A a_y = 0$															

$$\rightarrow F_{NA} = m_A g$$

$$\rightarrow P - T = m_A a_x \quad (5)$$



force	x	y
grav	$-m_B g \sin \theta$	$-m_B g \cos \theta$
normal	0	$+F_{NB}$
rope	$+T$	0

$+m_B a_x \quad m_B a_y = 0$

$$\rightarrow F_{NB} = m_B g \cos \theta$$

$$\rightarrow T - m_B g \sin \theta = m_B a_x \quad (5)$$

Sub

$$P - m_B g \sin \theta - m_B a_x = m_A a_x$$

$$\rightarrow a_x = \frac{P - m_B g \sin \theta}{m_A + m_B} \quad (2)$$

Therefore

$$T = P - m_A a_x$$

$$T = P - \left[\frac{P - m_B g \sin \theta}{m_A + m_B} \right] \cdot m_A$$

c)
$$F_{Nd} = m_B g \cos \theta \quad (4)$$