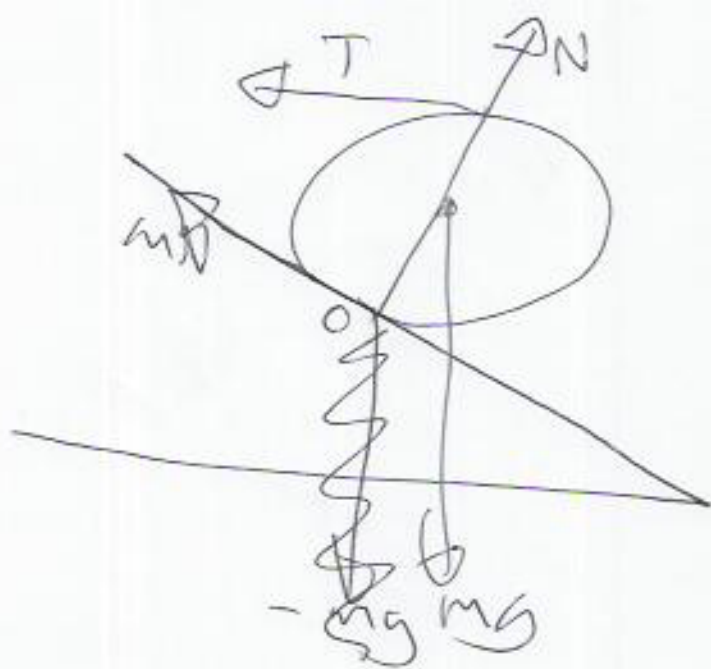


29)



b) $T = -Ti$

$N = N \sin \alpha i + N \cos \alpha j$

$mg = -mgj$

$\mu N = \mu N \cos \alpha i + \mu N \sin \alpha j$

c) $0 = \mu N$

$mg = R \sin \alpha i + R \cos \alpha j$

$N = 0$

$T = R(1 + \cos \alpha)$

e) $TR(1 + \cos \alpha) = mgR \sin \alpha$

$T = \frac{mg \sin \alpha}{1 + \cos \alpha}$

f) $\mu N \cos \alpha + T - N \sin \alpha = 0$

$\mu N \cos \alpha = N \sin \alpha - T$

$N(\mu \cos \alpha - \sin \alpha) = -T$

$\mu N \sin \alpha + N \cos \alpha = mg$

$N(\mu \sin \alpha + \cos \alpha) = mg$