

Connected bodies : Inclined table

Questions

1. For a fixed non-zero angle of inclination what happens to acceleration if the mass suspended is increased?
2. For a non-zero angle of inclination, is it possible for unequal masses to be in equilibrium (stationary)?
3. For a non-zero angle of inclination, is it possible for equal masses to be in equilibrium (stationary)?
4. Is it possible for equal masses to be in equilibrium when angle of inclination is not zero?
5. For a given angle of inclination, is it possible for a lighter mass on table and a heavier suspended mass to be in equilibrium?
6. For a given angle of inclination, is it possible for a heavier mass on table and a lighter suspended mass to be in equilibrium?
7. For fixed values of masses what happens to acceleration when the angle is increased?
8. For fixed values of masses what happens to tension in the string when the angle is increased?
9. Is it correct to say that both bodies have equal accelerations?

Note :

W
h
i
l
e

s
i
m
u

l
a
t
i
o
n
s

h
e
l
p

t
o

p
r
o
v
i
d
e

v
a
l
u
a
b
l
e

i
n

s
i
g
h
t
s

a
n
d

v
i
s
u
a
l
i
z
a
t
i
o
n
s
,

a

r
i
g
o
r
o

u
s

m
a
t
h
e
m
a
t
i
c
a
l

s
o
l
u
t
i
o
n

s
h
o
u
l
d

a
l
w

a
y
s

b
e

c
o
n
s
i
d
e
r
e
d

a
s

a

b
e
n
c
h
m
a
r
k
,

d

e
m
o
n
s
t
r
a
t
i
n
g

n
o
t

j
u
s
t

f
a
m
i
l
i
a
r
i
t
y

w

i
t
h

t
h
e

c
o
n
c
e
p
t
,

b
u
t

a

d
e
e
p

u
n
d
e
r
s
t

a
n
d
i
n
g

o
f

t
h
e

u
n
d
e
r
l
y
i
n
g

p
r
i
n
c
i
p
l
e

S

.

Learn Explore Enjoy

SIGMA Physics resource Centre