A picture containing text, clock

Description automatically generated

Velocity (Changing of position)

Diagram

Description automatically generated

All the force are vectors

Diagram

Description automatically generated



Text, letter

Description automatically generated

Diagram

Description automatically generated with medium confidence

Text

Description automatically generated

Text

Description automatically generated with medium confidence

Diagram

Description automatically generated

Bigger timestep

A picture containing text

Description automatically generated

Diagram

Description automatically generated with medium confidence

Smaller timestep=> slower simulation, lots of calculation

Bigger timestep=> faster simulation, less accurate

Text

Description automatically generated

A picture containing shape

Description automatically generated

A picture containing shape

Description automatically generated

A picture containing shape

Description automatically generated

A picture containing chart

Description automatically generated

Diagram

Description automatically generated

# Practice Quiz

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generatedf=ma

4=10a

a=4/10=0.4

A picture containing table

Description automatically generated

mass = 100

force = (0,0,40)

acceleration = (0,0,0.4)

velocity=(0,0,0)

position = (0,0,0)

timestep = 0.1

t0=0

f=[0,0,40]

v=[0,0,0]

p=[0,0,0]

t1=0.1

f=[0,0,40]

v=[0,0,40\*0.1]=[0,0,0.4]

p=[0,0,t0z+(t0v\*0.1)]= [0,0,0]

t2=0.2

f=[0,0,40]

v=[0,0,40\*0.2]=[0,0,0.8]

p=[0,0,t1z+(t1v\*0.1)]= [0,0,0+(0.4\*0.1)]= [0,0,0.04]

t3=0.3

f=[0,0,40]

v=[0,0,40\*0.3]=[0,0,1.2]

p=[0,0,t2z+(t2v\*0.1)]= [0,0,0.04+(0.8\*0.1)]= [0,0,0.12]

Application

Description automatically generated with medium confidence

Gravity=9.8

Mass=10

Coefficient =3

Acceleration=0

F=ma

R-mg=ma

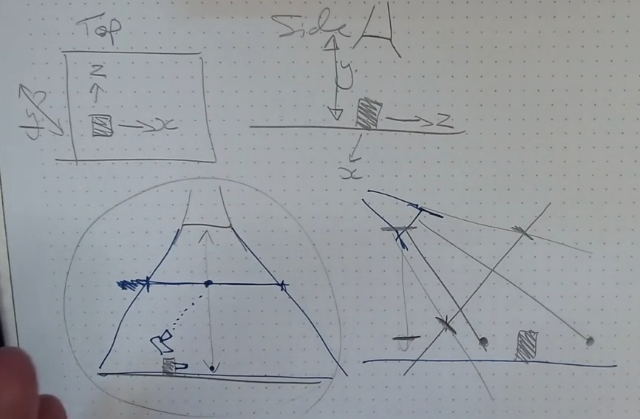
R-(10\*9.8) = 10\*0

R=98

Fmax=μR

= 3\*98

=294



# Summative Quiz

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Table

Description automatically generated with low confidence

Fk = μk η

Fk = μk mg

Fk = (2)(3)(9.80)

= 58.8

<https://www.softschools.com/formulas/physics/kinetic_friction_formula/92/>

Graphical user interface, application, Teams

Description automatically generated

[ 1, 2, 3, 4

5, 6, 7, 8

9, 10, 11, 12] => 3x4

Graphical user interface, text, application

Description automatically generated

[ 9 ,4 \* [7

5, 5 ] 6]

2x2 \* 2x1 = 2x1

[ 9 \* 7 + 4 \* 6

5 \* 7 + 5 \*6 ]

= [ 87,

65]

Background pattern

Description automatically generated

||2,1,9|| =

= 9.27

(2/9.27, 1/9.27, 9/9.27) = (0.22, 0.11, 0.97)

Table

Description automatically generated with low confidence

f = ma

f = 3\*5

= 15

Background pattern

Description automatically generated with medium confidence

(9, 0, 1) · (6, 5, 0) = ax × bx +ay × by + az x bz

= 9\*6 + 0\*5 + 1\*0

= 54

A picture containing table

Description automatically generated

mass = 50

force = (300,0,0)

acceleration = (300/50,0,0) = (6,0,0)

velocity=(0,0,0)

position = (0,0,0)

timestep = 0.1

t0=0

f= [300,0,0]

v=[0,0,0]

p=[0,0,0]

t1=0.1

f=[300,0,0]

v= [6\*0.1,0,0] = [0.6,0,0]

p=[ t0x+(t0v\*0.1),0,0]= [0,0,0]

t2=0.2

f=[300,0,0]

v=[6\*0.2,0,0]= [1.2,0,0]

p=[ t1x+(t1v\*0.1,0,0)]= [0+0.6\*0.1,0,0]= [0.06,0,0]

t3=0.3

f=[300,0,0]

v=[6\*0.3,0,0]=[1.8,0,0]

p=[ t2x+(t2v\*0.1),0,0]= [0.06+(1.2\*0.1),0,0]= [0.18,0,0]