What is gravity? the pull of two masses or Each other

Does gravity increase or decrease?

I If you increase the mass of one of the objects?

I If you decrease the distance between the two objects?

D If you decrease one of the masses?

D If the objects are farther apart?

If an object is not touching a table is there friction between them?

NO, there needs to be contact to have friction

What is another name for air friction?

air resistance

Friction always causes what?

Heat

Give an example of good friction.

Varies Tires on a road

Give an example of bad friction.

varies Car Engine out of oil

Newtons	C	A.	Variable for acceleration
m/s	D	B.	Sum of all forces
Joules	G	C.	Unit for force
a	A	D.	Unit for speed
kg	H	E.	Variable or mass
m/s^2	F	F.	Unit for acceleration
kg*m/s	I	G.	Unit for energy
F_{net}	B	H.	Unit for mass
m	E	I.	Unit for momentum

Balanced or unbalanced forces?

U 10 N left and 5 N right?

U An object accelerating?

B An object at constant speed?

B An object at rest?

B If a = 0?

B If $\Delta v = 0$?

U When an object turns a corner?

Balanced or unbalanced forces? $F_{net} = \Sigma F = 31N + -10N = 21N$

Calculate the net force and acceleration of the object.

$F_{net} = 21N$ $F = m \cdot a$

$a = ?$ $a = F/m$

$m = 3kg$ $a = \frac{21N}{3kg} = -7m/s^2$

Which has more inertia: more mass, more inertia

A 50 kg object or a 10 kg object?

A 30 kg object on the earth or in space? Same

A 20 kg object going 50 m/s. or a 30 kg object at rest.

What is the difference between mass and weight?

mass change, weight doesn't (except on other planets)

Which changes in space? Weight

Mass or Weight: W 20 N: M 30 kg?

Which falls faster: heavy or light objects?

Why? In space the Fall at same rate, On Earth, the heavy object

A 4 kg object accelerates 12 m/s^2 to the left. find the force on it.

F ? $F = m \cdot a$

m 4kg $= 4kg \cdot -12m/s^2 = -48N$

a $-12m/s^2$

A 30 N net force pulls to the right on a 5 kg object. Find its acceleration.

F 30N $F = m \cdot a$

m 5kg $a = F/m = \frac{30N}{5kg} = 6m/s^2$

a ?

Will it accelerate faster or slower?

S If you increase an object's mass.

F If you increase the force on the object.

Calculate the weight of a 12 kg object.

F_w ? $F_w = mg = 12kg \cdot 10m/s^2$

g $10m/s^2$

m 12kg 120N

Friction is a force that resists motion between two surfaces that are in contact.

The strength of the gravitational force between two objects depends on which two things?

mass + distance between objects

Forces that cancel each other are called balanced forces.

A change in motion is described by acceleration

A ball is thrown straight up in the air. According to Newton's first law of motion, what is the reason for the ball falling back to Earth?

the Unbalanced force of gravity pulls the object down

When unbalanced forces act on an object, A.

A. the object accelerates

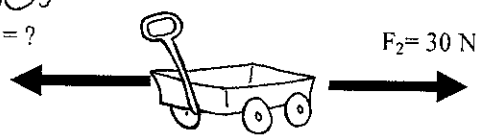
B. friction becomes greater than the net force

C. the object speeds up

D. he net force is zero

If a wagon is being pulled with 30 N of force to the right, if the forces stayed constant, how much friction would be needed to keep the wagon moving at a constant speed?

30N

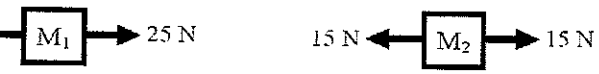


Mass and velocity values for a variety of objects are listed below. Rank the objects from smallest to greatest inertia

C < D < A < B

Object A	Object B	Object C	Object D
v = 2m/s	v = 0m/s	v = 4m/s	v = 3m/s
m = 10 kg	m = 20 kg	m = 5 kg	m = 8 kg

mass only matters



Which of the two above objects applies: M_1, M_2, both, or neither?

A. M_2 Could be at rest.

B. M_1 Could be accelerating.

C. M_1 Could be moving to the left.

D. Both Has a net force.

E. M_2 Is at constant speed.

F. Both Could be moving.

G. Neither Could be accelerating to the right.

H. M_2 Could be moving up.

I. M_1 Could have a velocity = 0m/s.

J. Neither Has no net force.