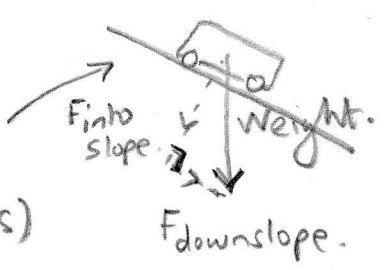
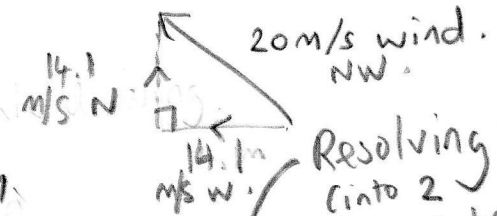


30m/s speed
100m distance
20kg mass

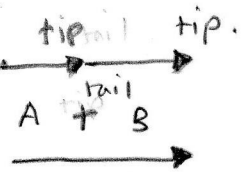
Force. Velocity displacement
← 30m/s.
100m East.

Weight 200N
↓ down.

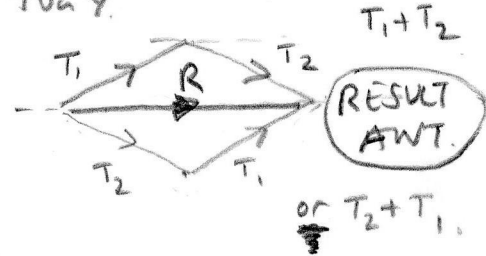
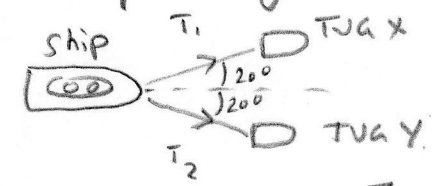


Resolving (into 2 components)

Adding vectors



parallelogram of forces.

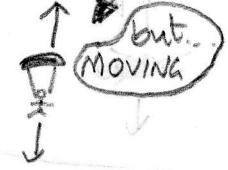
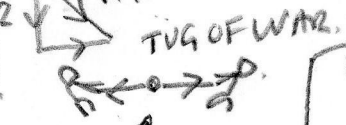


RESULTANT.

BALANCED.

UNBALANCED

ACCELERATION.



NEWTON'S 3RD LAW.
ACTION: REACTION
EQUAL & OPPOSITE

P8 Forces in Balance

SCALAR

Vector

Direction

SIZE ONLY

Magnitude

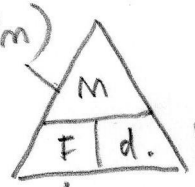
also... Direction
g = direction.
e.g. 1cm = 10N
SCALE

DRAWING

'anticlockwise moment'

MOMENTS.

Force. Distance.



pivot P

Effort

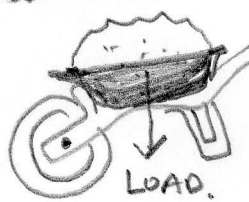
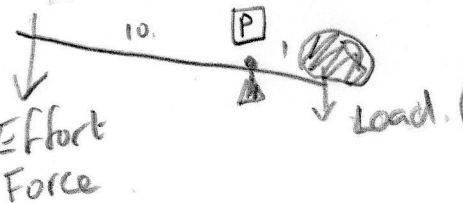
Centre of mass.

average position of mass.

plumbline.

EQUILIBRIUM

LEVERS (DOOR HANDLES, WHEELBARRROW)



(weight acts from)

BALANCED.

UNBALANCED

ACCELERATION.

10x distance so 10x less force needed.

