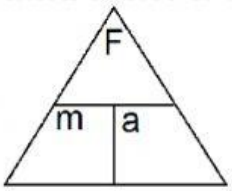
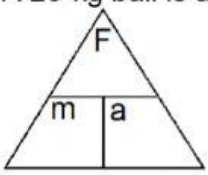
31. A dancer lifts his partner above his head with an acceleration of 3 m/s^2. The dancer exerts a force of 150N. What is the mass of his partner?



Answer Unit

N kg m/s m/s^2

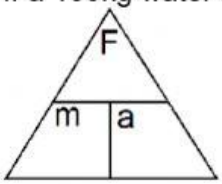
32. A 20-kg ball is accelerated 500 m/s^2 by what force?



Answer Unit

N kg m/s m/s^2

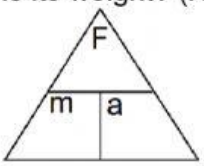
33. If a 100kg water rocket takes off with a force of 500N, what is its acceleration?



Answer Unit

N kg m/s m/s^2

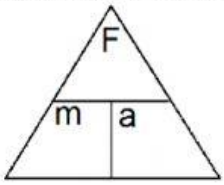
34. The acceleration of gravity is 9.8 m/s^2 on the earth, an object has a mass of 600kg what is its weight? (remember weight is equal to the force of gravity).



Answer Unit

N kg m/s m/s^2

35. How much force is needed to accelerate a 200kg truck at a rate of $4m/s^2$?



Answer Unit

N kg m/s m/s^2