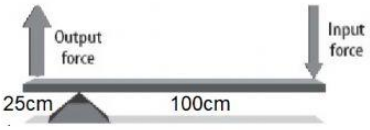
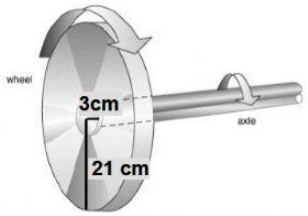
Calculations

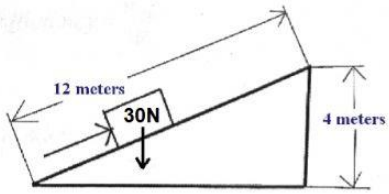
31. 

The Mechanical Advantage of the lever in the picture is _____.

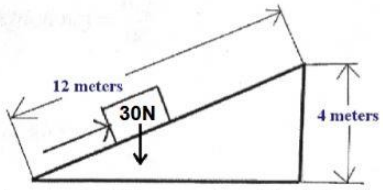


THE WHEEL AND AXLE IS A WHEEL CONNECTED TO A RIGID POLE.

32. The Mechanical Advantage of the Wheel and Axle pictured is _____.



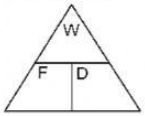
33. The Ideal Mechanical Advantage of the ramp is _____.



34. Assume that this ramp is an Ideal Machine. The force required to slide the box up the ramp would be ____**N**__.

35. If you exert a force of 25 newtons on a can opener, and the opener exerts a force of 125 newtons on the can, the ideal mechanical advantage of the can opener is _____

36. If you exert a force of 30 newtons to push a desk 10 meters, how much work do you do on the desk?

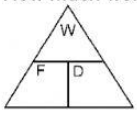


Answer Unit

N kg J W

number only no commas

37. The distance from the bottom of stair case to the top is 4 meters, your weight is 600N. How much work will you do getting to the top?

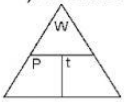


Answer Unit

N kg J W

number only no commas

38. When you walk up the stairs it takes you 20 seconds. (These are the stairs from question 37). Find the power you used to walk up the stairs.



Answer Unit

N kg J W

number only no commas

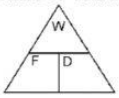
39. When you run up the stairs it takes you 5 seconds. (These are the stairs from question 37) Find the power you used to run up the stairs.

Answer Unit

N kg J W

number only no commas

40. You hold your 60 newton book bag in the hall for 8 minutes while you are waiting for class to start. How much work have you done?



Answer Unit

N kg J W

number only no commas