Activity 2

Pulleys and rotatory transmission mechanisms

1 Identify the pulley components and drag them to their correct position

Pulley

Rope

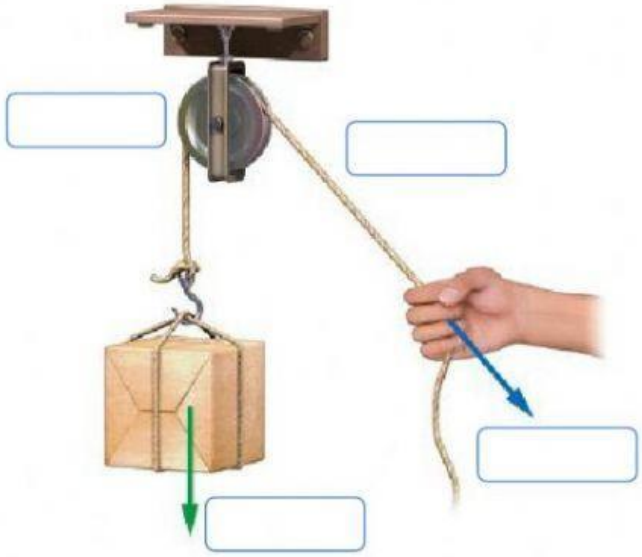
Lever

Effort

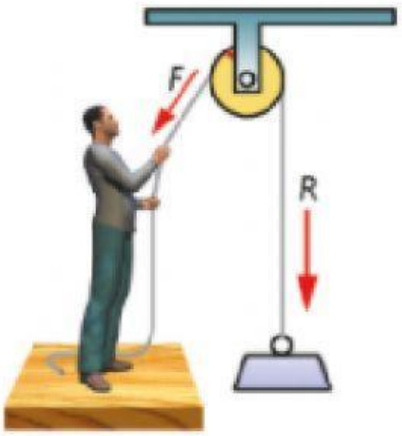
Arm

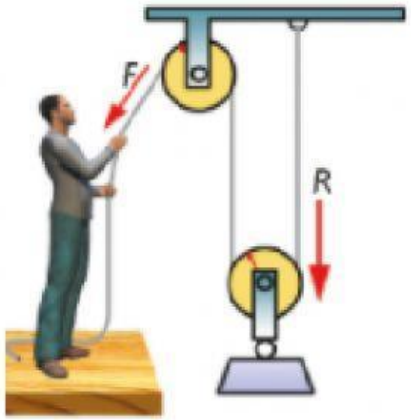
Ressistance

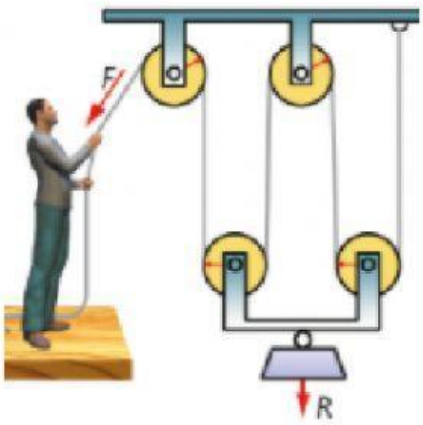
Pinion



2 Identify the types of pulleys and their formulas



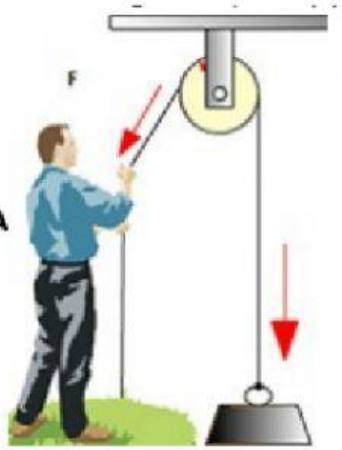




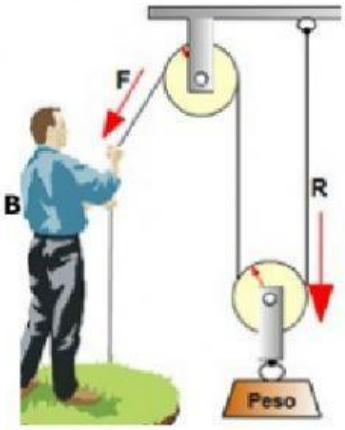
LIVEWORKSHEETS

3 Calculate the minimum effort that we will have to do with the following pulleys and hoists to lift an 80N body. In each case, indicate what type of pulley it is.

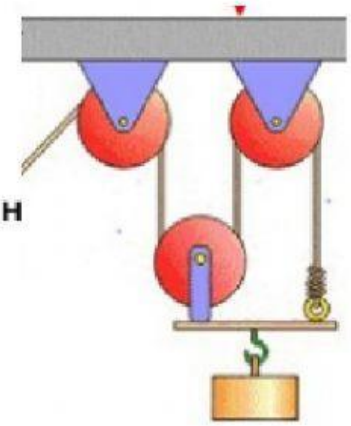
A

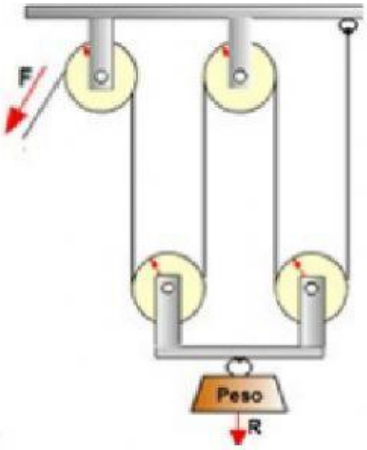


B



H

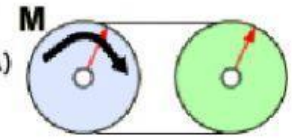




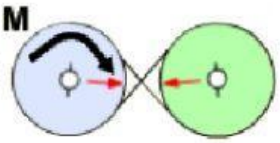
LIVEWORKSHEETS

1 Given the following circular transmission mechanisms, indicate in which direction each wheel will rotate and what type of mechanism it is (reducer, multiplier or maintains speed). The driver wheel is marked with an M

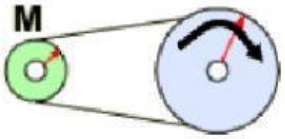
A)



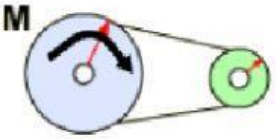
B)



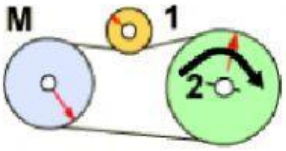
C)



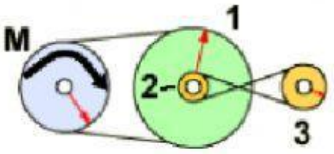
D)



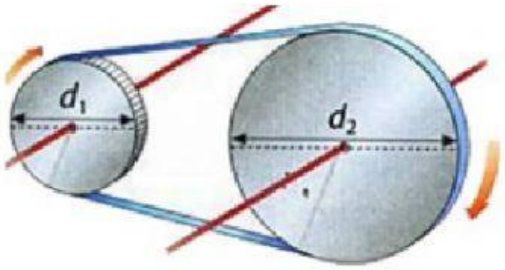
E)



F)



2 Calculate the output speed of the driven pulley (1) from the following diagram; as well as the gear ratio. Indicates whether it is a multiplier or reducer mechanism.



Data	Calculation	Solution
d1= 20cm d2=30cm w1= ?? w2= 1200rpm	output speed ___ x___=___x___ gear ratio i= -——	output speed: gear ratio: Type:

LIVEWORKSHEETS

3 In the system in the figure, the large gear has 40 teeth, while the small gear owns 20.

a) Calculate the gear ratio.

b) How fast does the small gear turn if the other thoot wheel turns at 300 rpm?



Data	Calculation	Solution
d1= d2= w1= w2=	output speed ___ x___=___x___ gear ratio i= -—	output speed: gear ratio: Type:

LIVEWORKSHEETS