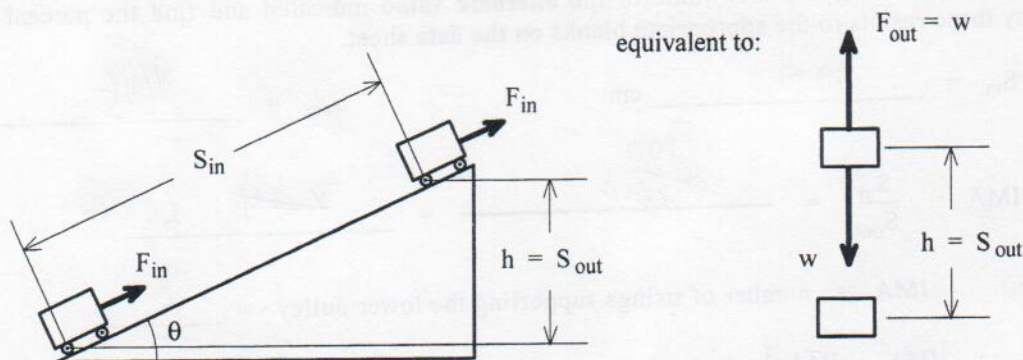


Figure 4

Inclined Plane as a Simple Machine



Apparatus

Triple-pulley assemblies (2 similar per setup)
 Weight pan
 50 g weight hanger
 Set of slotted weights
 Set of knob-top weights
 Inclined plane with attached protractor
 Hall's carriage
 Fishline and cutters
 Triple beam balance
 Meter stick
 Centimeter scale

Procedure, Data, and Calculations

Note: We will be using non-standard units of force and work in this experiment. Force is normally expressed in dynes and work in dyne-cm or ergs in the CGS system. One gram-weight (1 gwt) is the gravitational force the earth exerts on a one gram mass near the earth's surface. Here, we can get away with units of gwt for force and gwt-cm for work because we are only trying to compare input force to output force and work input to work output. In most other cases, such as where we are dealing with acceleration of masses or where we are relating work and kinetic energy, it is important to use standard units.

Pulleys:

1. Weigh the weight pan and record its weight:

$$w_{\text{pan}} = \underline{12.2} \text{ gwt}$$

2. String together the two triple-pulley assemblies as shown in Figure 3. (It is possible that you may be supplied with assemblies in which the three pulleys are on the same shaft instead of three separate