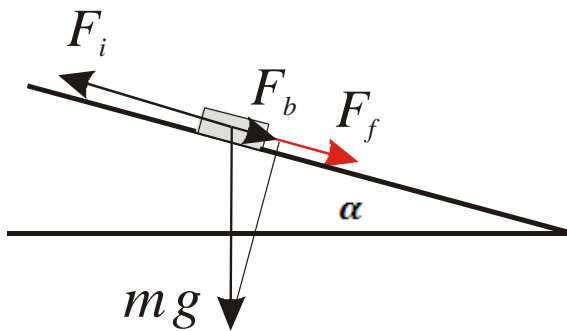


Question#20598

A car towing a trailer accelerates up a hill. Explain about the forces between the car and a trailer.

Answer:



On a trailer acting three forces:

F_i - the input force (force acting between the car and a trailer).

F_b - the roll back force: $F_b = mgsin\alpha$, where $m = \text{mass}$, $g = \text{gravity}$, $\alpha = \text{the slope angle}$

F_f - the frictional force is always in a direction opposite to the motion of the object.

If a car towing a trailer with acceleration:

The input force is more sums of forces:

$$F_i > F_b + F_f$$