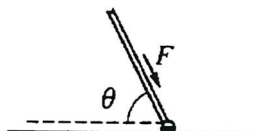


Note: To simplify calculations, you may use $g = 10 \text{ m/s}^2$ in all problems.



1. A force F is exerted by a broom handle on the head of the broom, which has a mass m . The handle is at an angle θ to the horizontal, as shown above. The work done by the force on the head of the broom as it moves a distance d across a horizontal floor is

- (A) $Fd \sin \theta$
- (B) $Fd \cos \theta$
- (C) $Fm \cos \theta$
- (D) $Fm \tan \theta$
- (E) $Fmd \sin \theta$

2. The velocity of a projectile at launch has a horizontal component v_h and a vertical component v_v . Air resistance is negligible. When the projectile is at the highest point of its trajectory, which of the following show the vertical and horizontal components of its velocity and the vertical component of its acceleration?

	<u>Vertical Velocity</u>	<u>Horizontal Velocity</u>	<u>Vertical Acceleration</u>
(A)	v_v	v_h	0
(B)	v_v	0	0
(C)	0	v_h	0
(D)	0	0	g
(E)	0	v_h	g