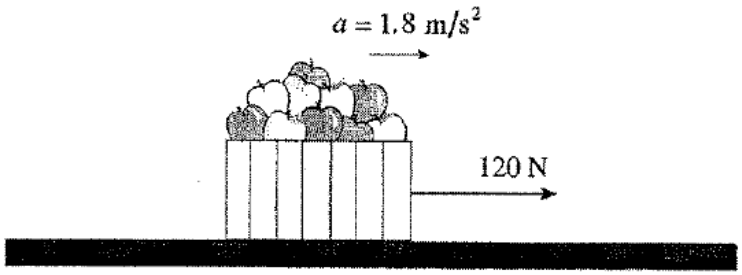
1.

A 45 kg toboggan and rider decelerate on level snow at 0.53 $m/s^2$. What is the coefficient of friction between the toboggan and the snow?

A. 0.012
B. 0.054
C. 0.22
D. 0.53

2.

A student exerts a 120 N horizontal force on a 25 kg carton of apples, causing it to accelerate over level ground at 1.8 $m/s^2$.




Find the coefficient of friction between the carton and the ground.

A. 0.31
B. 0.38
C. 0.49
D. 0.67

3.

A net force $F$ acts on an object of mass $m$, causing it to accelerate at 4.0 $m/s^2$. If the same net force $F$ acts on an object of mass $2m$, its acceleration will be

A. 1.0 $m/s^2$
B. 2.0 $m/s^2$
C. 4.0 $m/s^2$
D. 8.0 $m/s^2$

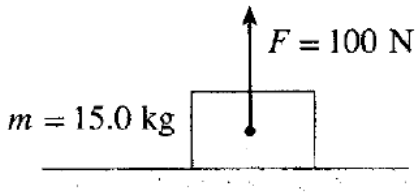
4.

A 72 kg skydiver from a helicopter and is accelerating downwards at 8.6 m/s$^2$. Find the friction force acting on him.

A. 86 N
B. 620 N
C. 710 N
D. 1 300 N

5.

A 15 kg block on a horizontal surface has a 100 N force acting on it as shown.

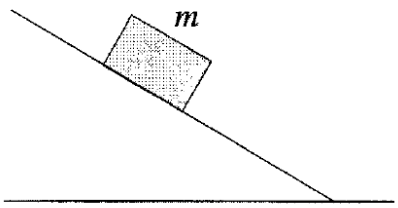



What is the normal force?

A. 47 N
B. 100 N
C. 147 N
D. 247 N

6.

A block of mass $m$ remains at rest on an incline as shown in the diagram.

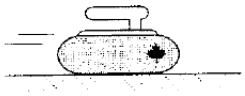



The force acting up the ramp on this block is

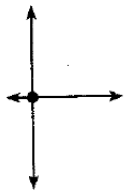
A. 0.
B. mg.
C. less than mg.
D. more than mg.

7.

A curling rock is travelling to the right across the ice as shown in the diagram.



Which of the following best represents the forces acting on the curling rock?

A. 

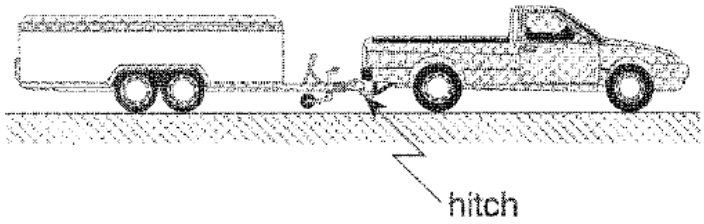
B. 

C. 

D. 

8.

A 1200 kg trailer is accelerated from rest to 15 m/s in 5.0 s. The average force of friction acting on the trailer is 800 N.




What is the pulling force applied to the trailer through the hitch?

A. 800 N
B. 2800 N
C. 3600 N
D. 4400 N