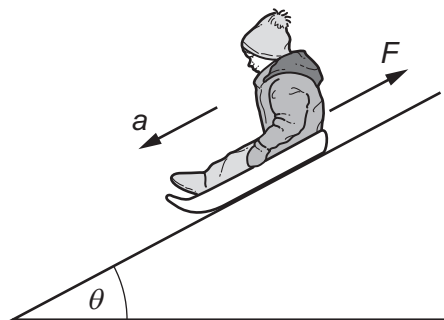12 A child on a sledge slides down a hill with acceleration a. The hill makes an angle θ with the horizontal.

The total mass of the child and the sledge is m. The acceleration of free fall is g.

What is the friction force F?

A $m(g\cos\theta - a)$

B $m(g\cos\theta + a)$

C $m(g\sin\theta - a)$

D $m(g\sin\theta + a)$