

Exercise 8-2

$$\Sigma F = ma$$

$$\begin{aligned}\therefore F &= (78.0)(14.0) \\ &= 1.09 \times 10^3 \text{ N}\end{aligned}$$

The accel'n. of any object is caused by forces exerted by objects that are external to the accelerating object. The force that accelerates the runner is exerted by the blocks. (The runner exerts a force on the blocks; by Newton's 3rd law, the blocks exert an equal & opposite force on the runner.)