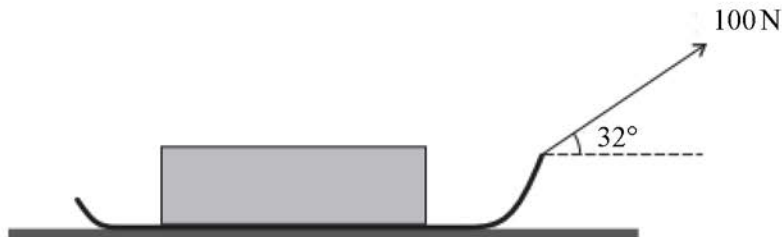


- 5 A woman is pulling a loaded sledge along horizontal ground. The only resistance to motion of the sledge is due to friction between it and the ground.



**Fig. 5**

At first, she pulls with a force of 100 N inclined at  $32^\circ$  to the horizontal, as shown in **Fig.5**, but the sledge does not move.

- (a) Determine the frictional force between the ground and the sledge.  
Give your answer correct to 3 significant figures. [2]
- (b) Next she pulls with a force of 100 N inclined at a smaller angle to the horizontal. The sledge still does not move.

Compare the frictional force in this new situation with that in part (a), justifying your answer.

[2]