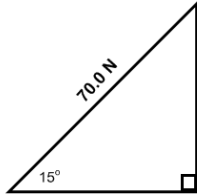
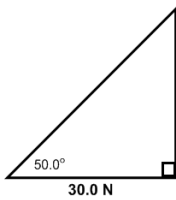


## Work questions

1. A mother is pulling her baby carriage over a distance of 2.0 km with a force of 70.0 N at a  $15^\circ$  angle. What is the work accomplished?

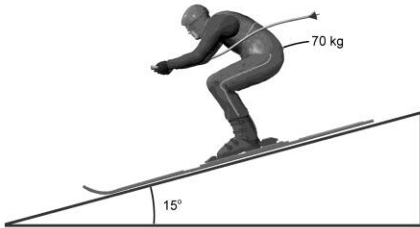


2. How much work is done when a boy pulls a sled over a distance of 20.0 m with an effective force of 30.0 N at a  $50.0^\circ$  angle?



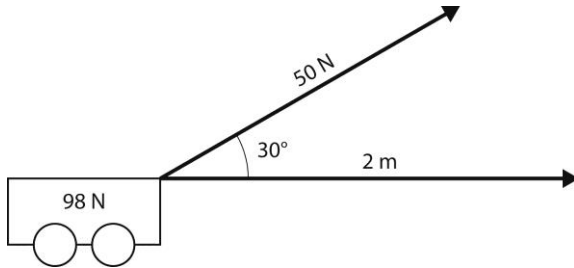
3. What is the distance travelled if a girl uses 1 500 J of energy with an effective force of 25 N for a walk in the park?
4. A girl is pushing a suitcase with an effective force of 100.0 N. If the work applied to the suitcase is 1200 J, over what distance has she been applying this force?
5. A person who is rollerblading applies a force of 45 N over a distance of 125 m. What is the amount of work accomplished?
6. What is the force used if the effective force of a woman pulling a sled is 45 N at a  $35^\circ$  angle?

7. How much work does the gravitational force acting on this skier represent if the skier travels 4 m?

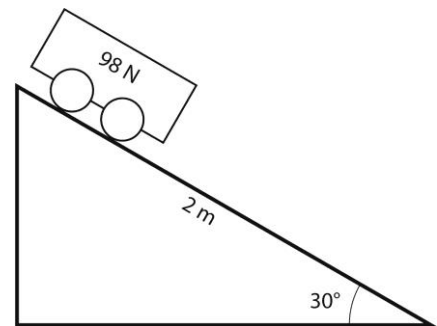


8. If each of the carts illustrated below travels a distance of 2 m, in which situation will the energy gained by the cart be greater? Show your calculations.

a)



b)

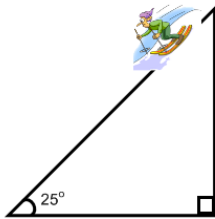


9. a- The effective force of a man pulling a cart is 75 N. The handle is at a 25° angle. If the maximum force he should apply is 50.0 N, is he using too much force?

b- Using the results above, what is the work accomplished by the man if he is pulling the cart for 10 m?

10. What is the force applied if a boy does 7 009 J of work while walking up a hill for 705 m?

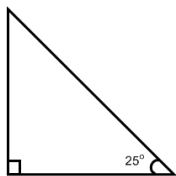
11. How much work is done if a skier with a mass of 90.0 kg is skiing down a hill at a  $25^\circ$  angle for 35 km?



12. You are pushing your lawnmower for 3.0 m with an effective force of 35 N. What is the work accomplished?

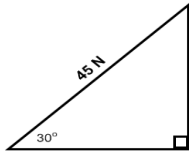
13. What is the distance travelled if a boy uses 700 070 J of energy with an effective force of 100.0 N for a jog?

14. How much work does the gravitational force acting on a skier represent if the skier's mass is 75 kg and he travels 7.0 km down a hill at a  $25^\circ$  angle?



15. What is the distance travelled if a girl uses 9 000 J of energy with an effective force of 70 N for a walk in the park?

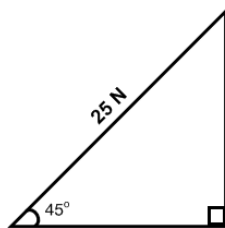
16. How much work is done when a man pulls his luggage at the airport for 255 m with a force of 45 N at a  $30.0^\circ$  angle?



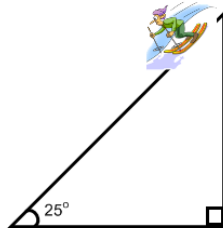
17. What is the force applied if a boy does 15 000 J of work while skating for 300.0 m?

18. Which person does more work?

- a- A boy pulls his sister on a sled at a  $45^\circ$  angle for 105 m with a force of 25 N.
- b- A man skiing down a hill at a  $25^\circ$  angle for 35 km with a mass of 85 kg.
- c- A girl walks 2.0 km with an effective force of 25 N.



A



B

19. Which are examples of work:

- a- A man lifts a box
- b- You sit and watch TV
- c- You jog every morning