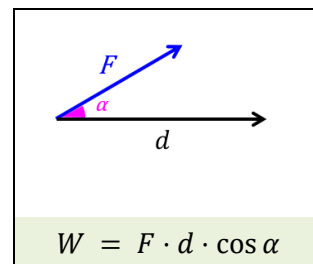
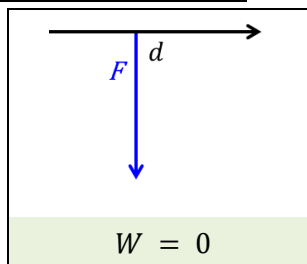
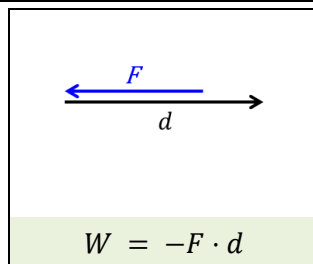
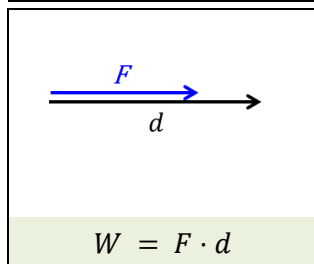




1	Travail
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Exercise 1 (12 points) Complete the sentences.

In physics, Work is basically the multiplication of a and a .

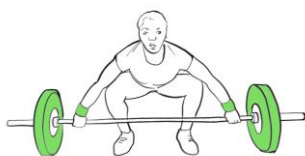
About the units, work is measured in , while is measured in

and is measured in . Work can be equal

to zero in three cases : first if there is no , then if there is no ,

finally if and are .

Exercise 2 (4 points) A weightlifter wants to lift 1000 N:



a)



b) and c)



d)

a) He pulls with all his strength for 3 minutes, but nothing moves. What is his work?

b) He then lifts the 1000 N over 1.7 m. What is his work?

c) What is the work of the weight of the dumbbell during the lift?

a) The weightlifter supports 1000 N without moving for 20 seconds. What is his work?

Exercise 3 (4 points) To move a tank on a flat road, a force of 250 N must be performed:

a) Why should we exert a force?

b) What is the work of this force for a displacement of 2 m?

c) What is the work of this force for a travel of 2 km?

d) What is the work done by the force of gravity?

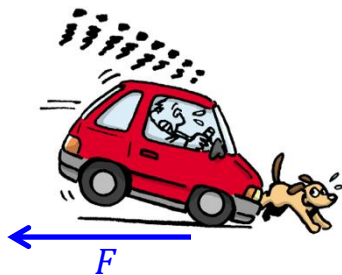
Exercise 4 (2 points) A child pulls a toy using a string:

The traction force it exerts forms an angle of 60° with the movement of the toy and its intensity is equal to 25 N. What is the work done for a movement of 200 meters of the toy?

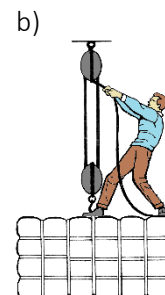
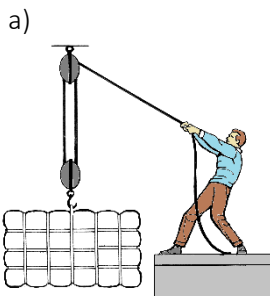


Exercise 5 (2 points) A car brakes with a force of 2000 N over a distance of 5 m:

What is the work of the braking force?



Exercise 6 (3 points) A man who weighs 700 N wants to lift a bag which weighs 500 N and raise it 4 m:



a) What is the work performed by the man in a)?

b) What is the work performed by the man in b)?

c) What is the best technique?