

Newton laws worksheet 12

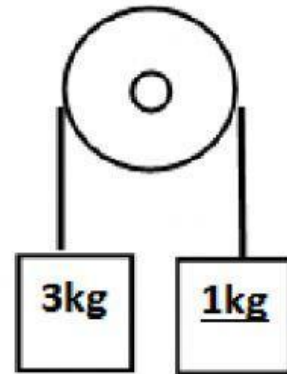
This worksheet needs to be done in your physics book only. The memo will be sent when you are ready to mark 😊

Exercise 9

This is a frictionless pulley.

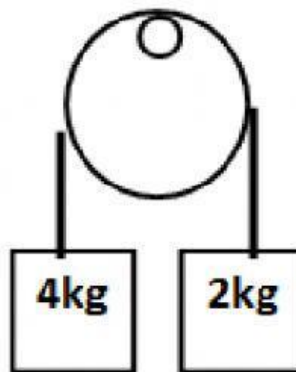
Calculate:

- 1.1 The force of gravity on each box
- 1.2 The acceleration of the system
- 1.3 The tension in the cable



2. This pulley is frictionless.
Calculate:

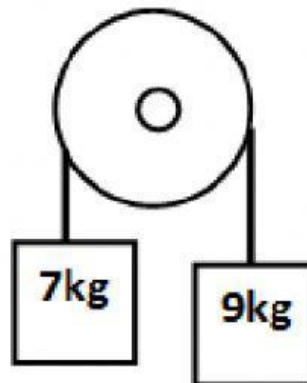
- 2.1 The force of gravity
- 2.2 The acceleration of the system
- 2.3 The tension in the string



3. This pulley is frictionless.

Calculate:

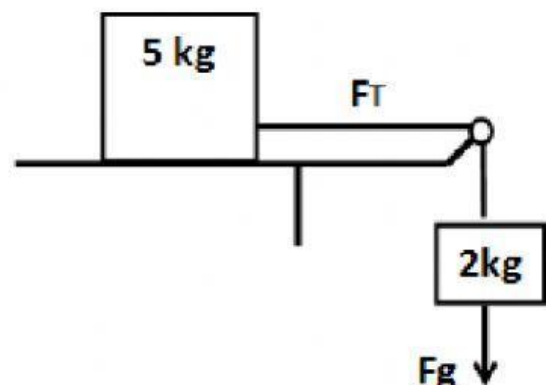
- 3.1 The acceleration of the system
- 3.2 The tension in the string



4. The motion of the system shown in the sketch is frictionless.

Calculate:

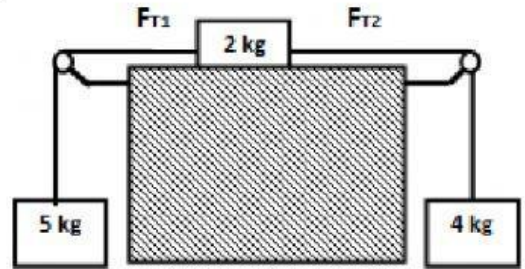
- 4.1 The acceleration of the system
- 4.2 The tension in the string



5. 3 blocks are connected with string as shown in the diagram.

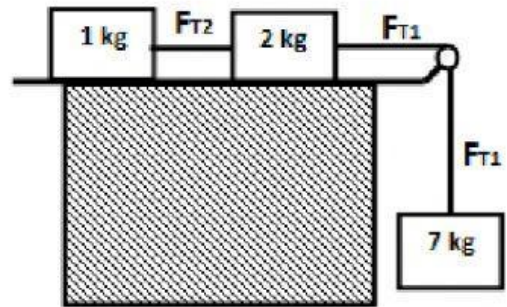
Calculate:

- 5.1 Draw a force diagram for each block
- 5.2 The acceleration of the system
- 5.3 Tension (F_{T1} & F_{T2}) in the two strings



6. Draw or Determine:

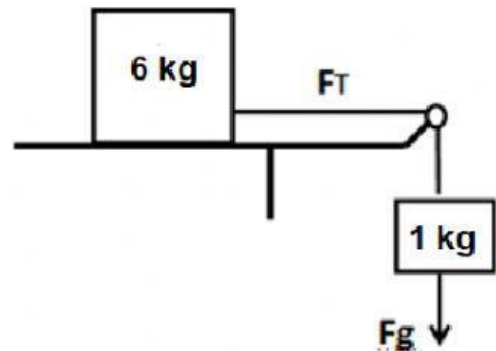
- 6.1 A force diagram for each block
- 6.2 Acceleration of the system
- 6.3 Tension in F_{T1}



7. The friction on the system on the right is 2 N.

Calculate

- 7.1 the acceleration of the system
- 7.2 the F_T

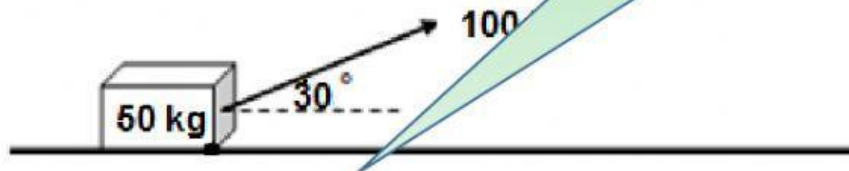


Forces at an angle

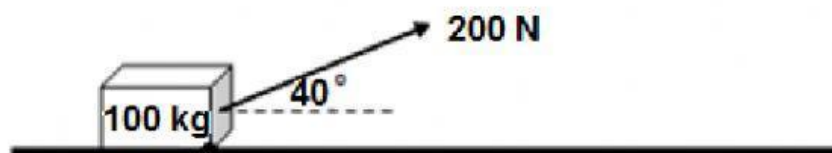
Exercise 10

Determine the horizontal and vertical components of the following forces:

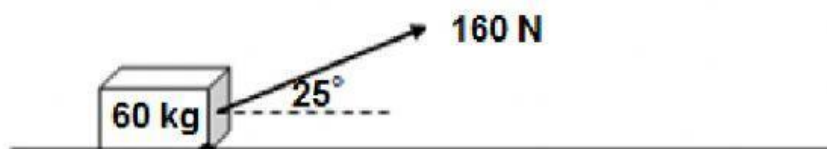
1.



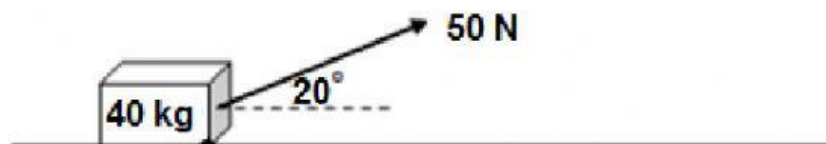
2.



3.



4.



Remember that it is useful to split a force at an angle up into the horizontal and vertical components so that we can add or subtract forces in a straight line

I have finished this worksheet yes