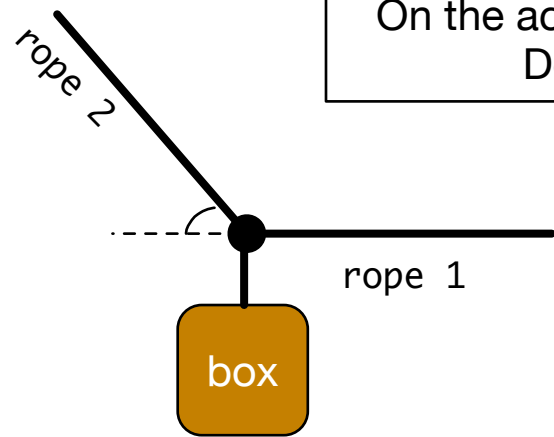


Cycle 8-9 Components: Ropes and Inclines

Quiz Review

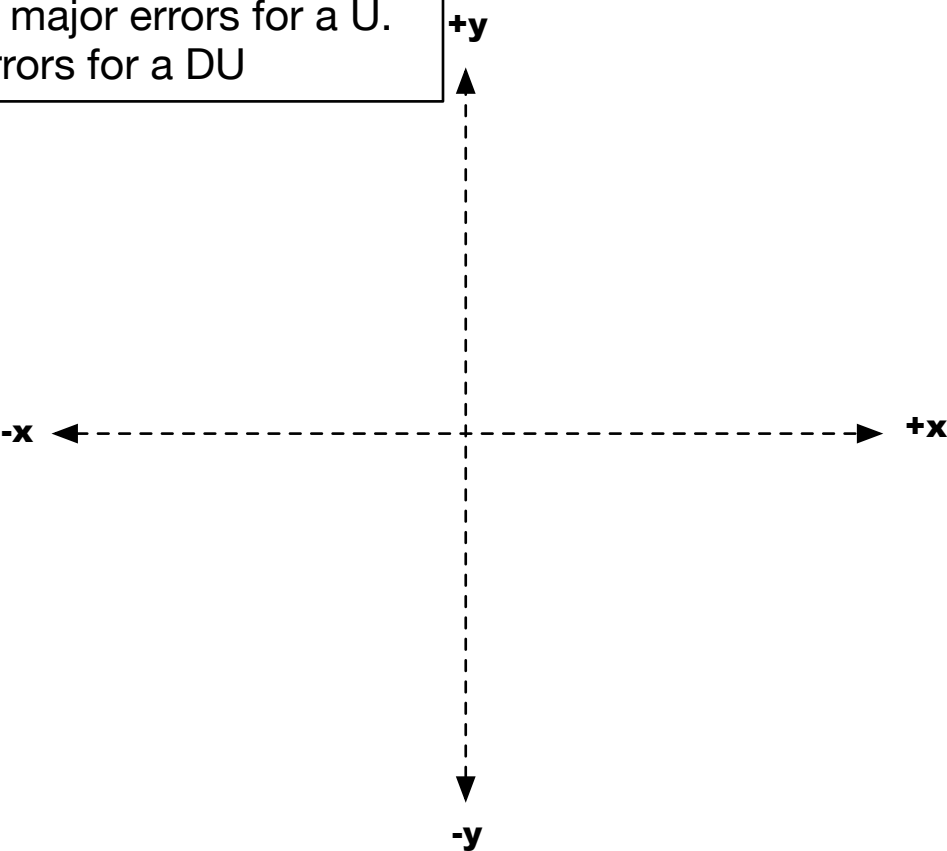
On the actual quiz: do 3 with no major errors for a U.
Do all 4 with no major errors for a DU



The box is at rest and staying at rest, and not touching the ground.

The box has mass 7 kg. The tension in rope 1 is 25 N.

- a) Draw the forces on the diagram.
- b) Determine the tension in rope 2 and the angle of rope 2.



X Net Force

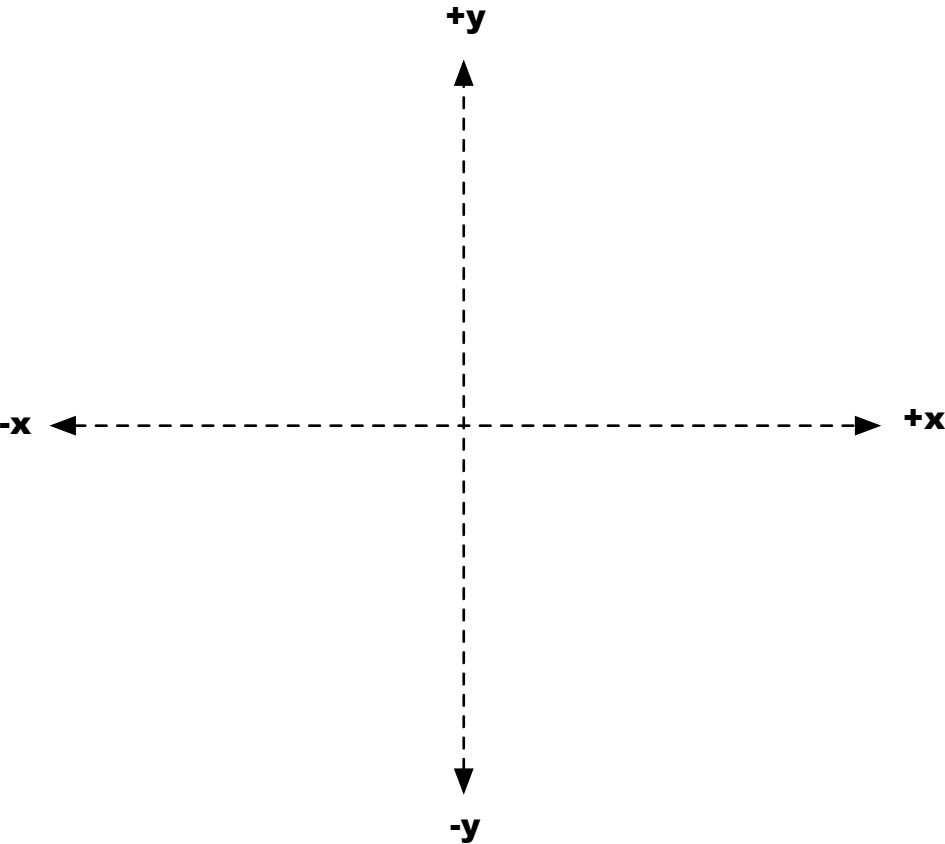
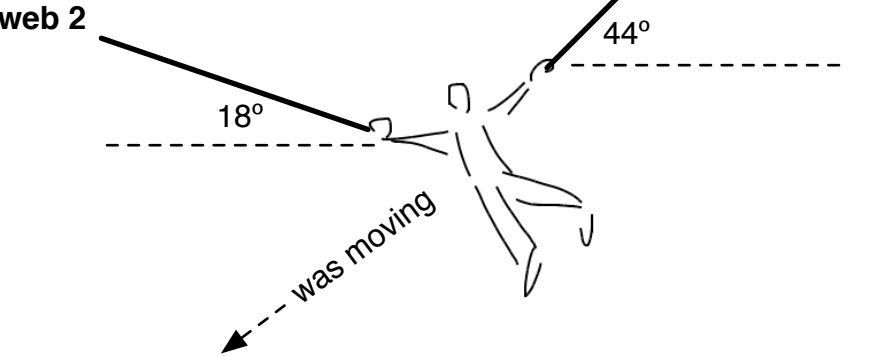
Y Net Force

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

Spiderman was swinging down and to the left. His mass is 75 kg. The tension in web 1 is 800 N and the tension in web 2 is 400 N.

Find the net Forces and check the correct box for his motion.

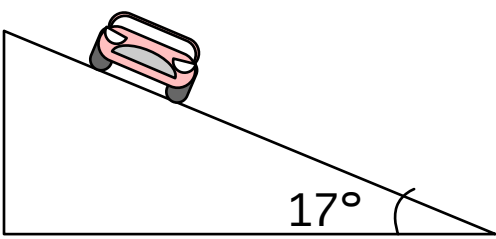


X Net Force

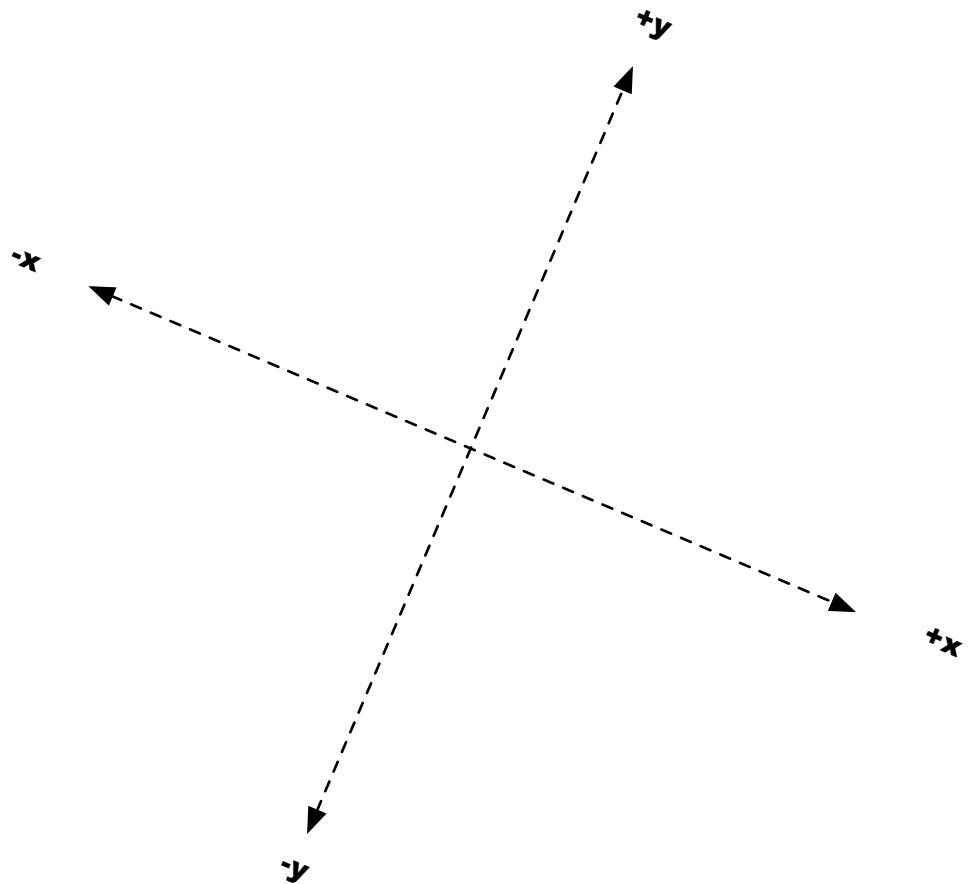
- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

Y Net Force

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.



The 950 kg vehicle is **at rest and staying at rest**. Solve for the Normal Force and Friction, and the net forces.

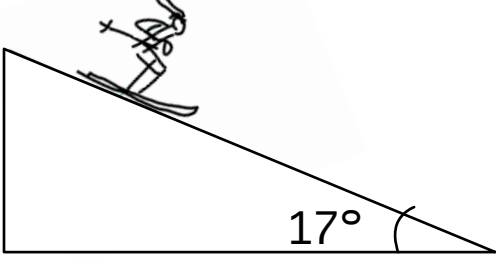


X Net Force

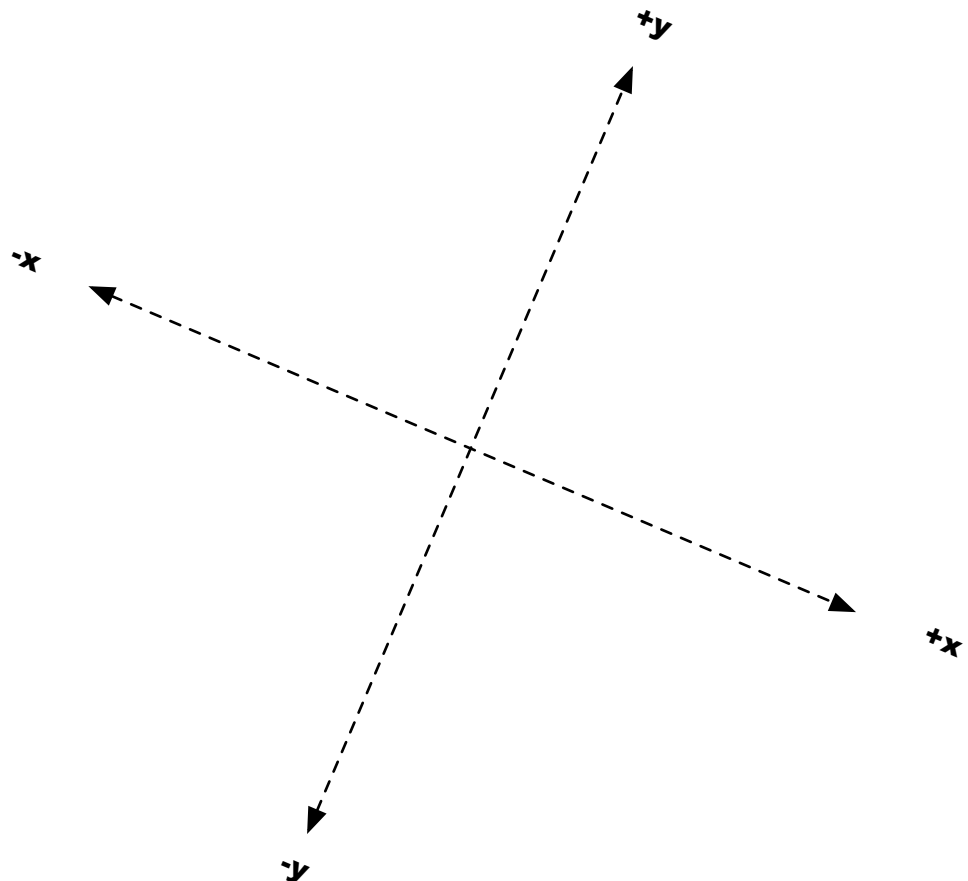
- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

Y Net Force

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.



The 85 kg skier is **skiing down the hill**. The coefficient of friction is 0.15. Solve for the Normal Force and Friction, and the net forces.



X Net Force

Y Net Force

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.