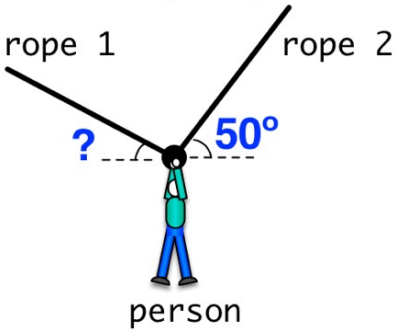
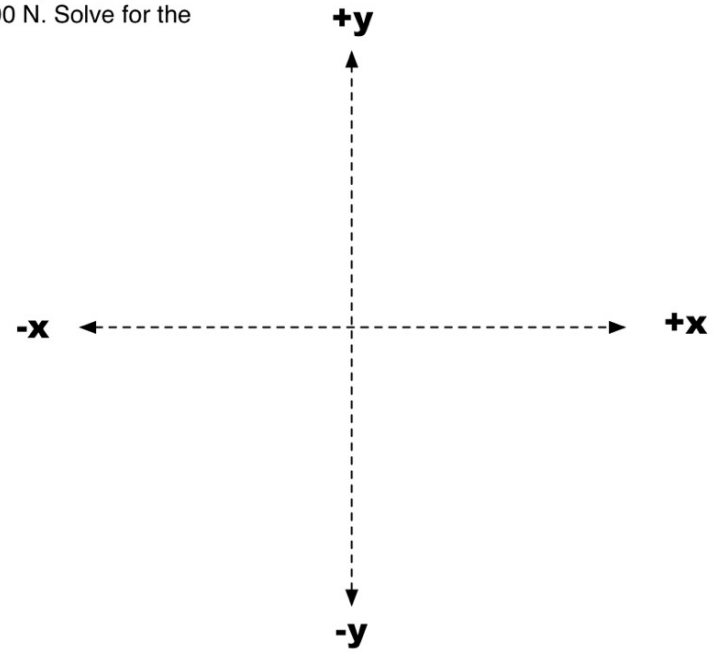
The person is at rest and staying at rest, and not touching the ground. The tension in rope 2 is 1000 N and the person weighs 900 N. Solve for the tension and angle of rope 1





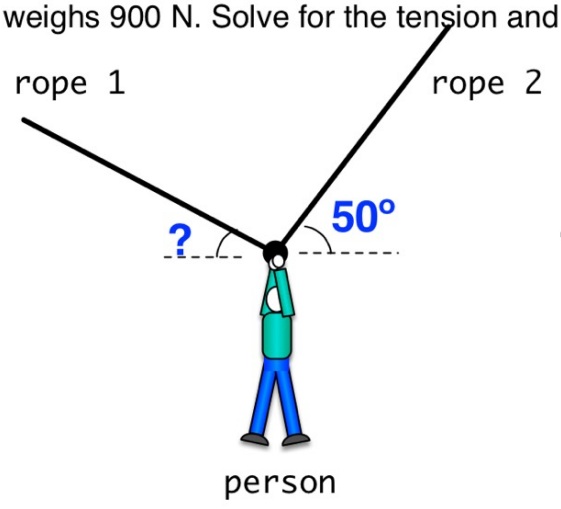
Fnet in the y

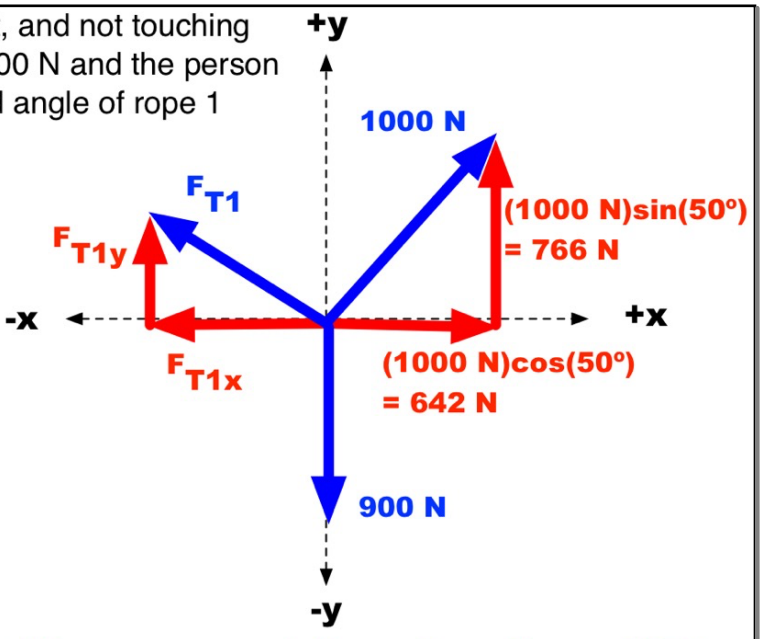
- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

Fnet in the y

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

The person is at rest and staying at rest, and not touching the ground. The tension in rope 2 is 1000 N and the person weighs 900 N. Solve for the tension and angle of rope 1





F_{T1x} has to equal the x-component of rope 2, so F_{T1x} = 642 N

F_{T1y} and the 766N have to cancel the 900 N weight, so F_{T1y} = 13

Fnet in the y
0

☐ gaining speed.
☒ constant speed.
☐ losing speed.

Fnet in the y
0

☐ gaining speed.
☒ constant speed.
☐ losing speed.

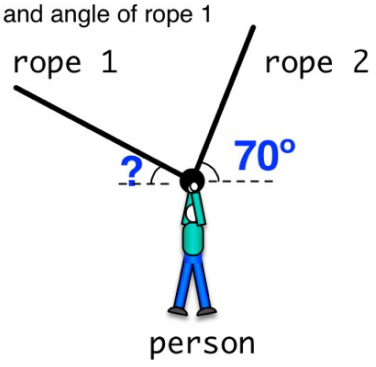
$$F_{T1} = \sqrt{(642\ N)^2 + (134\ N)^2}$$

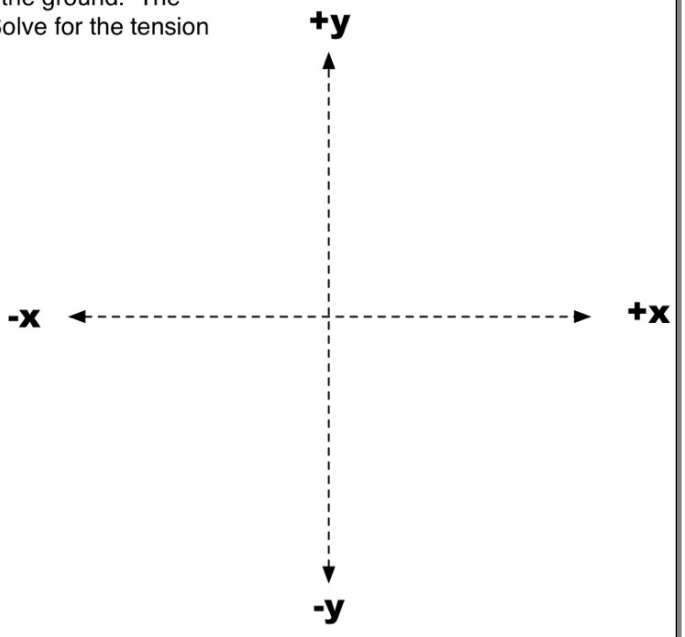
F_{T1} = 656 N

$\theta = \tan^{-1}(134\ N/642N)$

$\theta = 11.8°$

The person is at rest and staying at rest, and not touching the ground. The tension in rope 2 is 800 N and the person weighs 900 N. Solve for the tension and angle of rope 1





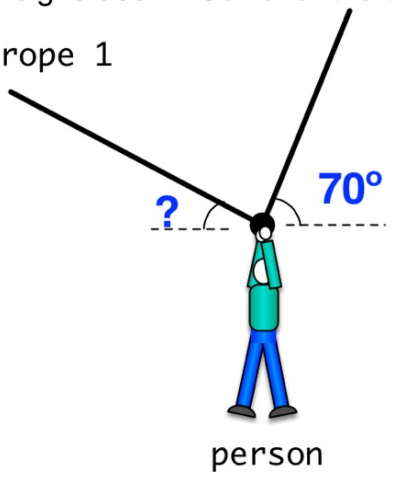
Fnet in the y

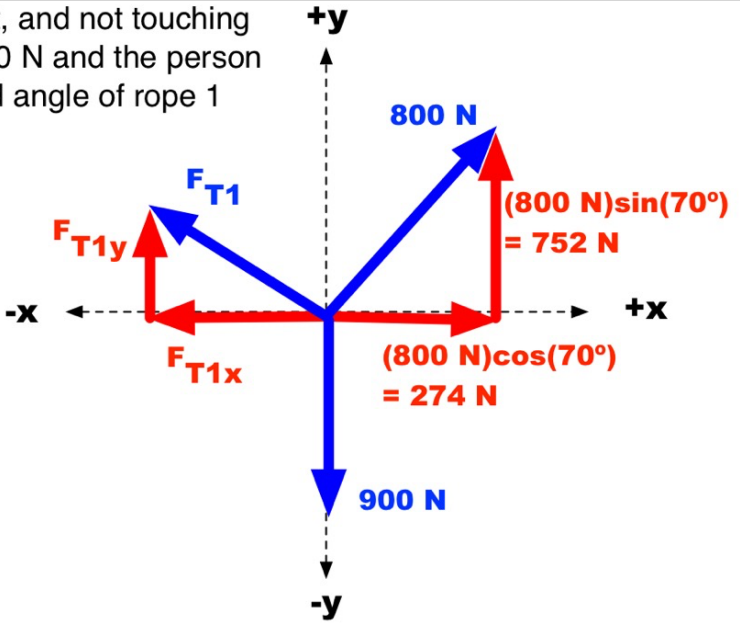
- ☐ gaining speed.
- ☐ constant speed.
- ☐ losing speed.

Fnet in the y

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

The person is at rest and staying at rest, and not touching the ground. The tension in rope 2 is 800 N and the person weighs 900 N. Solve for the tension and angle of rope 1





F_{T1x} has to equal the x-component of rope 2, so F_{T1x} = 274 N

F_{T1y} and the 752 N have to cancel the 900 N weight, so F_{T1y} = 148 N.

Fnet in the y
0

☐ gaining speed.
☒ constant speed.
☐ losing speed.

Fnet in the y
0

☐ gaining speed.
☒ constant speed.
☐ losing speed.

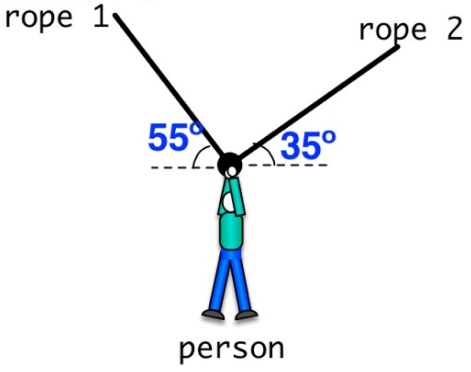
$$F_{T1} = \sqrt{(274\ N)^2 + (148\ N)^2}$$

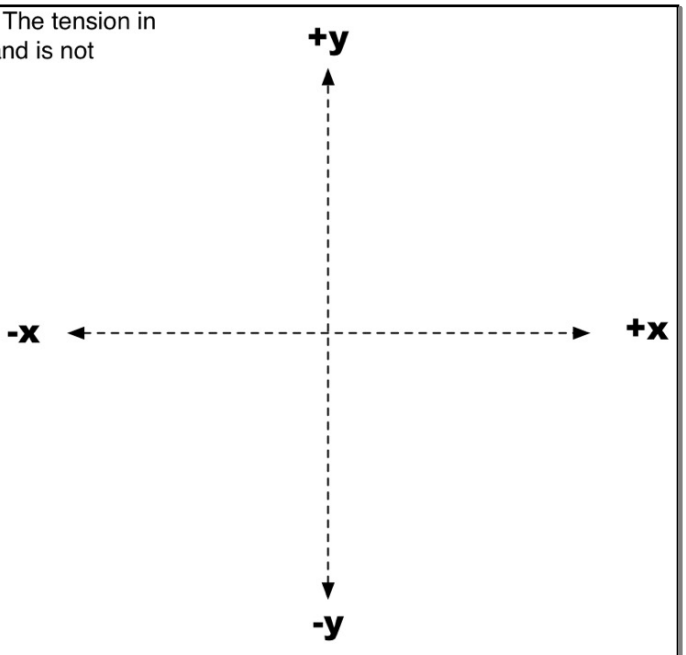
$$F_{T1} = 311\ N$$

$$\theta = \tan^{-1}(148/2$$

$$\theta = 28°$$

The person starts at rest. The tension in rope 1 is 700 N. The tension in rope 2 is 800 N. The person weighs 1000 N was at rest, and is not touching the ground. Solve for the Net Forces.



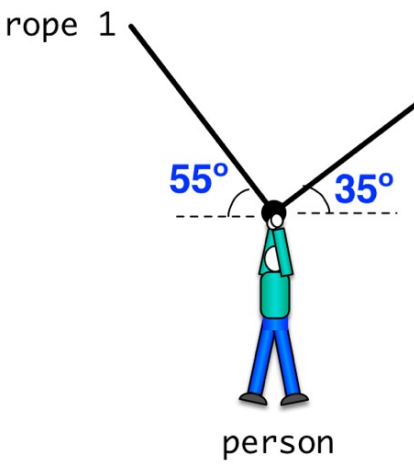


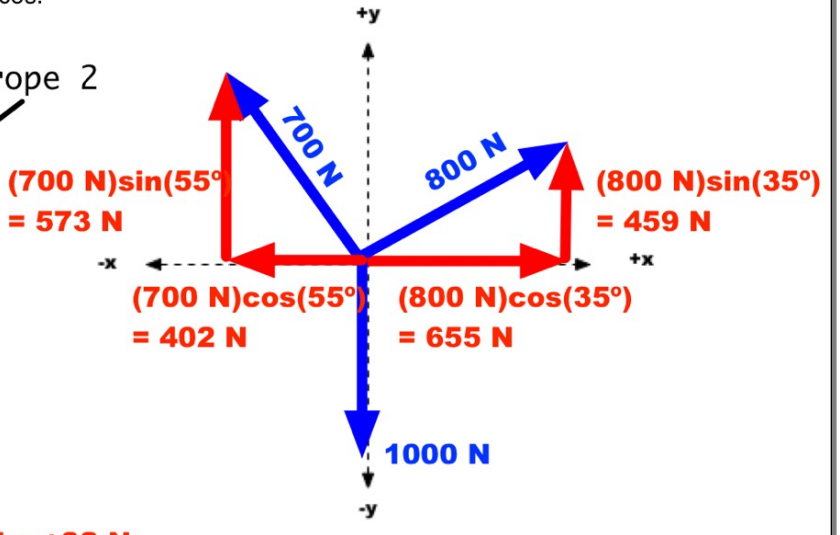
Fnet in the x	Fnet in the y

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

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

The person starts at rest. The tension in rope 1 is 700 N. The tension in rope 2 is 800 N. The person weighs 1000 N was at rest, and is not touching the ground. Solve for the Net Forces.





Fnet y: 573 N + 459 N - 1000 N = +32 N

Fnet x: 655 N - 402 = +253 N

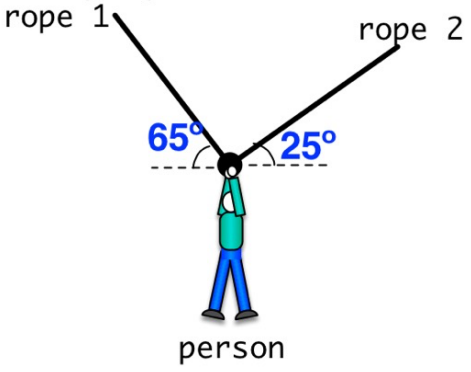
Fnet in the x
+253 N

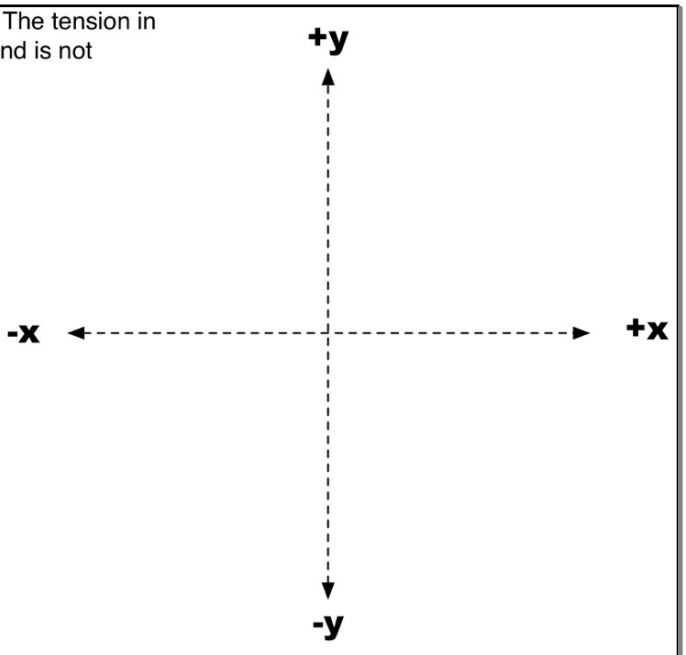
☒ gaining speed.
☐ constant speed.
☐ losing speed.

Fnet in the y
+32 N

☒ gaining speed.
☐ constant speed.
☐ losing speed.

The person starts at rest. The tension in rope 1 is 900 N. The tension in rope 2 is 600 N. The person weighs 1100 N was at rest, and is not touching the ground. Solve for the Net Forces.



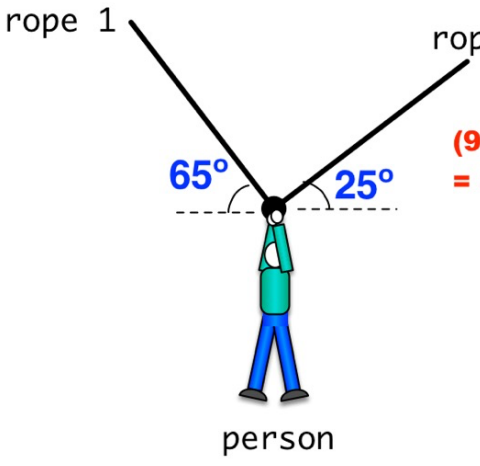


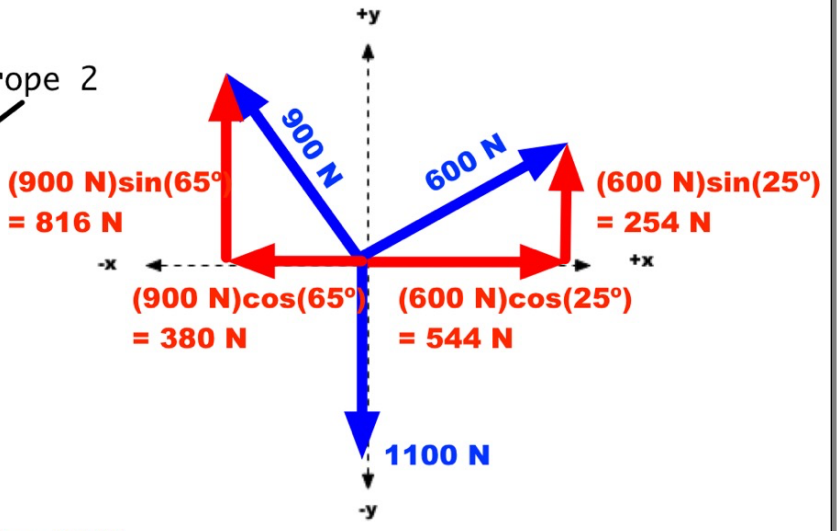
Fnet in the x	Fnet in the y

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

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

The person starts at rest. The tension in rope 1 is 900 N. The tension in rope 2 is 600 N. The person weighs 1100 N was at rest, and is not touching the ground. Solve for the Net Forces.





Fnet y: 816 N + 254 N - 1100 N = -30 N

Fnet x: 544 N - 380 = +164 N

Fnet in the x
+164 N

☒ gaining speed.
☐ constant speed.
☐ losing speed.

Fnet in the y
-30 N

☒ gaining speed.
☐ constant speed.
☐ losing speed.