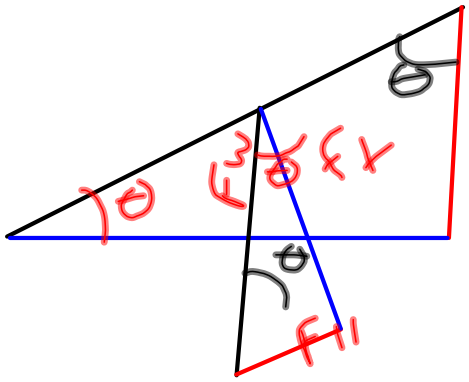
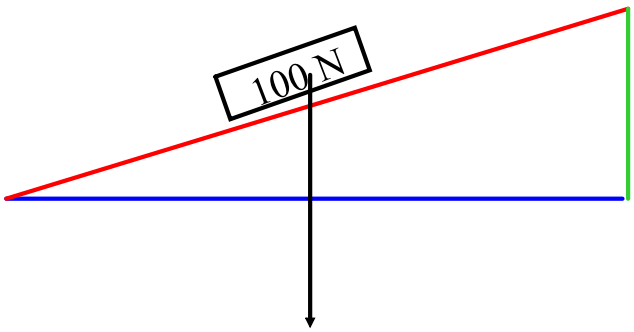


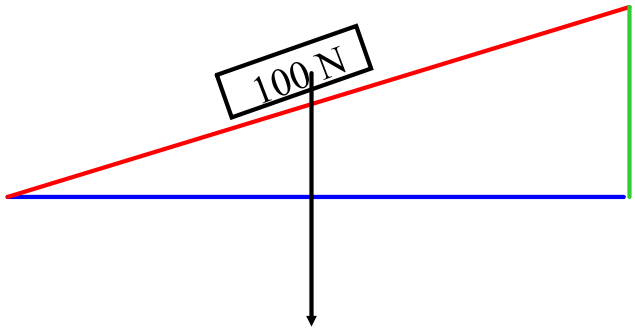
Oct 19-7:52 AM

A 100 N box is on a ramp that makes a 35 degree angle with the horizontal. The weight of the box acts straight down due to pull of gravity.



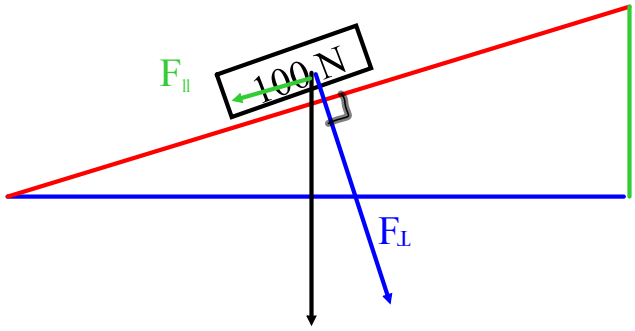
Oct 19-8:32 AM

A 100 N box is on a ramp that makes a 35 degree angle with the horizontal. The weight of the box acts straight down due to pull of gravity. What part of the box's weight acts parallel to the ramp ($F_{||}$) and what part acts perpendicular ($F_{\perp}$) ?



Oct 19-11:14 AM

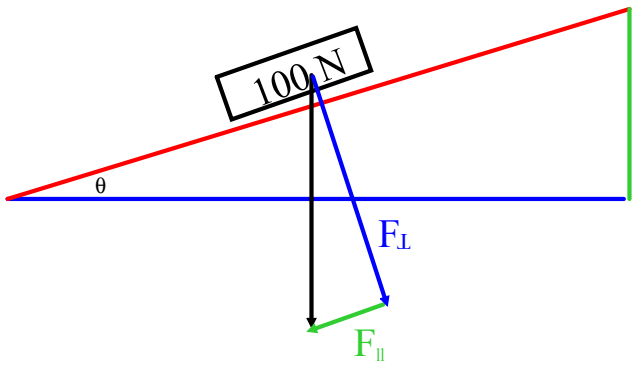
A 100 N box is on a ramp that makes a 35 degree angle with the horizontal. The weight of the box acts straight down due to pull of gravity. What part of the box's weight acts parallel to the ramp ($F_{||}$) and what part acts perpendicular ($F_{\perp}$) ?



Note that $F_{||}$ and $F_{\perp}$ are components of the weight of the box (100N) F_w. To add the components vectorally you would move the tail of $F_{||}$ down to the head at the head of $F_{\perp}$

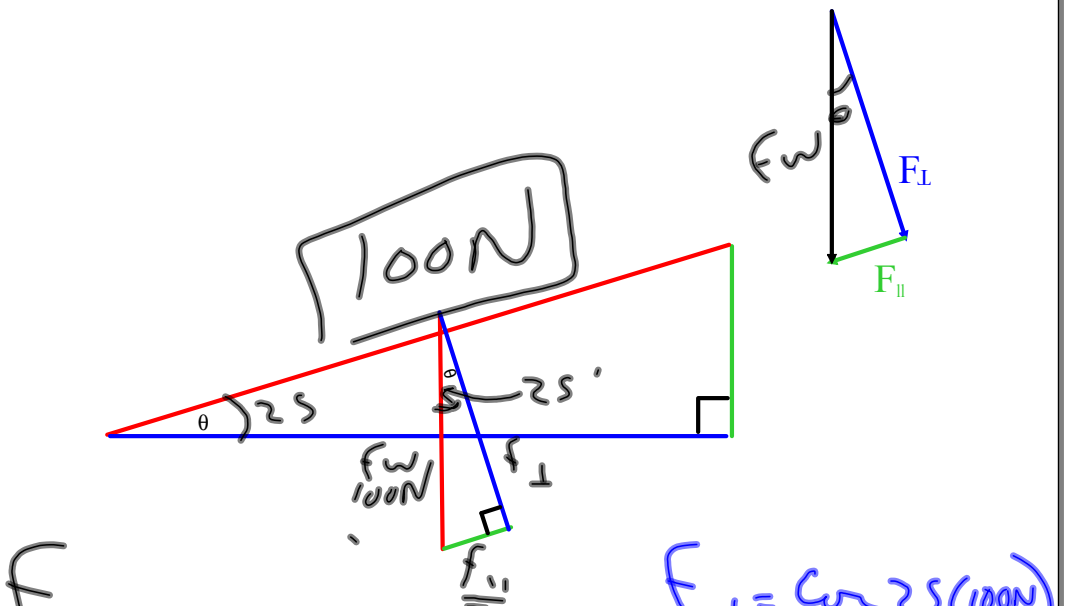
Oct 19-11:18 AM

A 100 N box is on a ramp that makes a 35 degree angle with the horizintal. The weight of the box acts straight down due to pull of gravity. What part of the box's weight acts parallel to the ramp ($F_{||}$) and what part acts perpendicular ($F_{\perp}$) ?



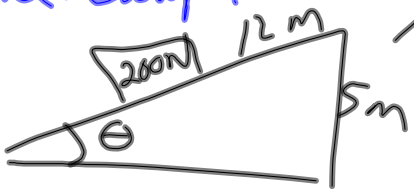
Note that $F_{||}$ and $F_{\perp}$ are components of the weight of the box (100N) F_w. To add the components vectorally you would move the tail of $F_{||}$ down to the head at the head of $F_{\perp}$

Oct 19-11:22 AM



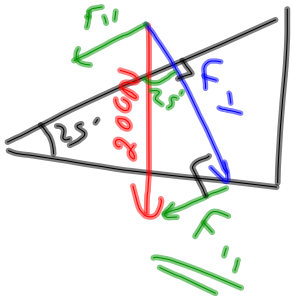
Oct 9-10:03 AM

a 200N box is on a 12 m ramp that's 5 m high. What is $F_{||}$ (how much of the box's weight acts down the ramp?



$\sin\theta = \frac{5m}{12m}$

$\theta = 25°$

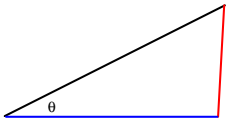


$\sin 25° = \frac{F_{||}}{200N}$

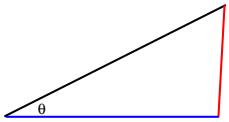
$F_{||} = \sin 25(200N)$

$F_{||} = 85N$

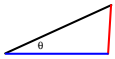
Oct 9-11:12 AM

1) 

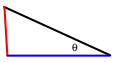
Ramp

2) 

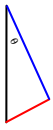
Clone of Ramp

3) 

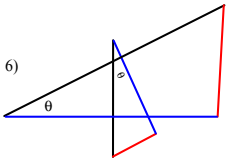
Smaller *Clone* of Ramp

4) 

left/right flip of Smaller *Clone* of Ramp

5) 

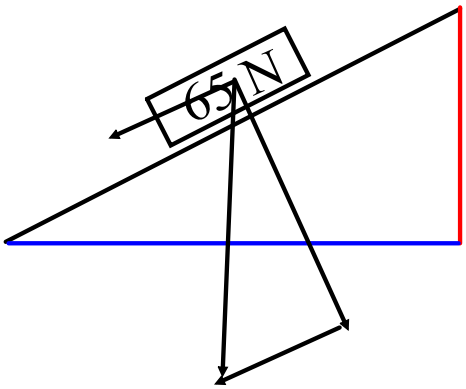
125 degree counterclockwise rotation of the left/right flip of Smaller *Clone* of Ramp

6) 

Ramp with the 125 degree counterclockwise rotation of the left/right flip of Smaller *Clone* of Ramp

Note how the black part of the smaller ramp is the same as the weight of the box (100N) and the blue part is the same as the perpendicular component and the red part the same as the parallel component. Note that the two triangles are similar to each other- therefore there angles are the same!!!

Oct 19-7:52 AM



Oct 6-6:55 AM