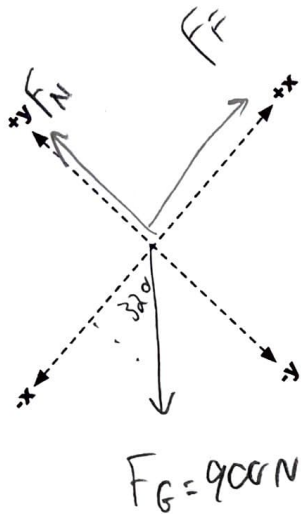


Deeper Understanding (Cycles 4-6) Review

Name: _____

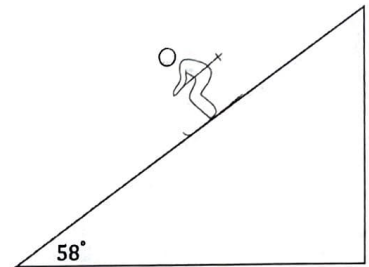


$$F_{\text{net}} = (-763\text{N}) + (86\text{N}) = \underline{\underline{-677\text{N}}}$$

$$F_{\text{net}} = -677\text{N}$$

$$a = \frac{F_{\text{net}}}{m} = \frac{677\text{N}}{90\text{kg}}$$

$$a = 7.5\text{m/s}^2$$



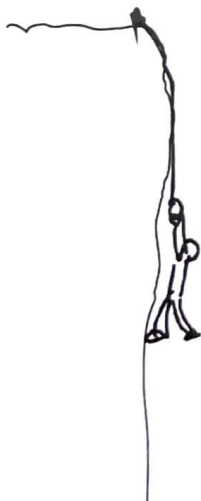
This 90 kg skier is sliding down this hill. The coefficient of friction is 0.18. How much will this skier accelerate down the hill?

Forces	x	y
F_G	$(900\text{N}) \cos 32$ -763N	$(900\text{N}) \sin 32$ -477N
F_N	0	F_N
F_f	F_f	0
F_{net}	F_{net}	0

$$F_N - 477\text{N} = 0$$

$$F_N = 477\text{N}$$

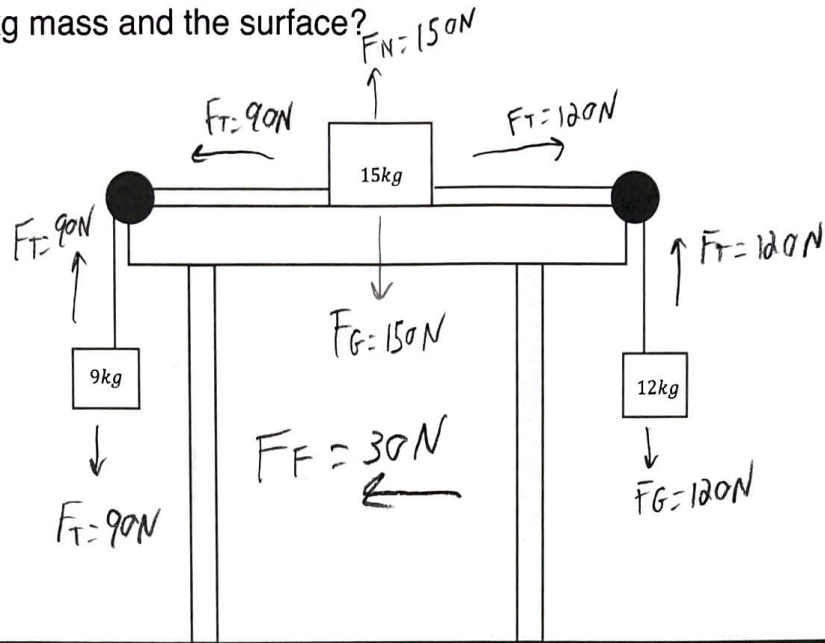
$$F_f = (0.18) \times (477\text{N}) = 86\text{N}$$



Which direction is this Rock Climber pulling this rope to move up the mountain?

Pulls the rope down
to move up!

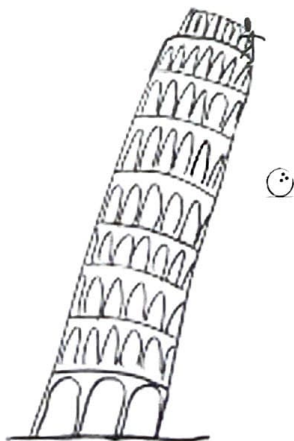
If all three masses are at rest and staying at rest, what is the coefficient of friction between the 15kg mass and the surface?



$$\mu = \frac{30N}{150N} = 0.2$$

What is the force of gravity on this 14kg bowling ball?

$$140N$$



Since forces come in pairs, if the action force is the Earth pulling down on the bowling with a force of gravity, what is the reaction force, and how much is it?

The Bowling Ball pulling the Earth to it w/ a Force of 140N