

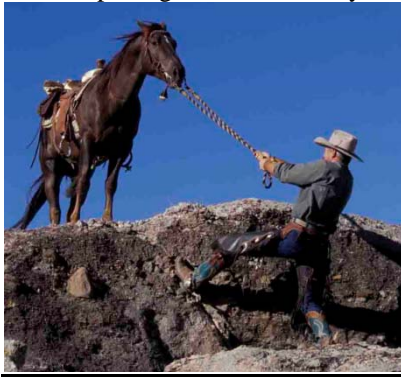
Applied Force 2

Solve the following problems

1. A person on a piece of exercise equipment pulls at an angle of 10° to the ground. If the resistance in machine is 80N horizontally, what is the force the person pulls with?



2. A cowboy tries to get his horse to walk down an incline by pulling the reins of the horse at 20° below the incline. If the cowboy is pulling with a force of 800N and the horse is moving horizontally at a constant rate. How much force must the horse be pulling with horizontally?



3. A fireman pulls a hose that is making a 10 degree angle with her shoulder and the fire truck. If the hose is stretched out 75 feet, what is the forward force she is pulling it, if she is accelerating with it at 0.5 m/s^2 . The hose is $\frac{3}{4}$ inch (19 mm) diameter, and water weighs 8lbs for every 231 cubic inches. Finally, the hose empty weighs 21lbs per 50 feet. Make sure to convert your problem. Also remember that half of the y force is supported by the truck.



Name: _____

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Date: _____

Chapter 4: Force and the Law of Motion

4. A body builder pulls a 14 kg tire with a force of 400N at 25° . What is the acceleration of the tire?



5. If a boy pulls a wagon at 30° with a force of 200N and the wagon accelerates at 1.5m/s^2 , how much was is the wagon and its occupants?



6. A person pushes a 490N wheelbarrow at 24° with a force of 150N. What is the acceleration of the wheelbarrow?

