

Chapter Seven

“Forces and Motion in Two Dimensions”

1. A cliff diver running at 4.5 m/s runs off a 23 m cliff. How far from the base of the cliff does the diver land?
2. A kicker kicks a ball from the ground at 21 m/s at an angle of 33° above the horizontal. How far does the ball go?
3. A 125 N box is pulled across the floor by a 45 N force directed 22° above the horizontal at a constant velocity? What is the coefficient of friction?
4. A 222 N box is placed on a 33° ramp and slides down at 1.1 m/s^2 . What is “ μ ”?
5. What force is needed to accelerate a 356 N box up a 35° ramp at 2.5 m/s^2 if μ is 0.22?

6. What force does each wire hold?

