

Physics Homework

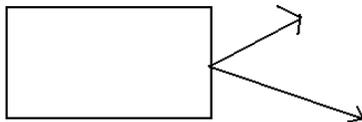
Name _____

Date _____ Period _____

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1) A piece of cake is cut while it sits on a plate. The plate pushes up with a force of 10.4N. The gravitational force on the cake is 9.3N. Draw a free body diagram showing all three forces acting on the cake.

2) Find the acceleration of the box with a mass of 4.5kg. The top force is 35N and the angle between the top force and the box is 50 degrees. The bottom force is 55N and the angle between the bottom force and the box is 70 degrees.



3) A ball with a mass of 5.0kg is dropped from a 150m building. The wind is blowing horizontally and exerts a force of 11.8N on the ball. How long does it take the ball to reach the ground?

4) How far from the building does the ball land?

5) A boy is pushing a lawn mower with a mass of 25.0kg. If he uses a horizontal force of 15.0N, how far will the mower move in 3.5s? Ignore friction.