PHYS 2130

Quiz #2

2. A ball is rolling down a 10° incline. Ignoring friction, the acceleration of the ball is

g=9.8 **g sin 10°=1.7** **g cos 10°=9.6**

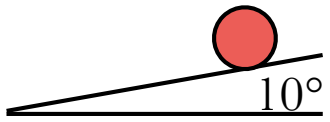

Fig. 2

3. Ball A is launched horizontally from the top of a cliff at the same time Ball B is dropped from the edge. Which hits the ground first?

Ball A **Ball B** **Both hit at the same time**

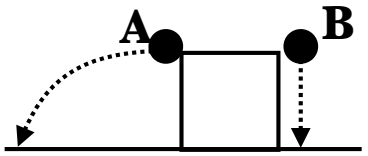

Fig. 3

4. A car is driving around a circular track at constant speed. What is the direction of the car's acceleration at the moment shown?

left ← **forward ↑** **right →** **backward ↓**

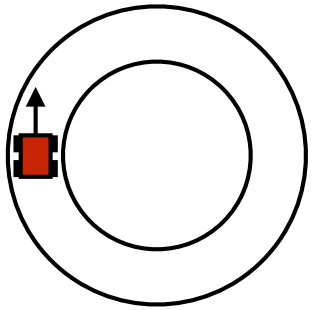

Fig. 4–5

5. This acceleration is caused by a force from the road on the car. Based on the direction, this force must be of which type?

normal **tension** **friction** **gravity**

6. An arrow is shot from a bow. Once the arrow leaves the bow, how many forces are acting on it? Ignore air resistance.

0 **1** **2** **3** **4+**

7. A stationary block with weight W is being pulled on by a rope with tension T. If the coefficient of static friction between block and table is μ_S, the static friction force S is

0 ***T*** ***μSW*** ***W***

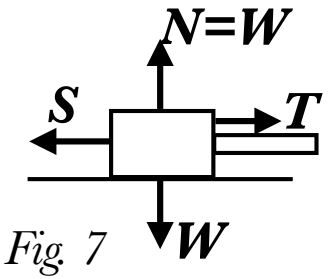

Fig. 7