

**Physics 2205**  
**Quiz 5—Form A**

21 September, 1999

1. Julie is spinning a yo-yo of mass 0.1 kg on a string in a vertical circle at constant velocity (which would be pretty hard to do). Calculate the difference in the tension in the string between the top and bottom of the circle if the radius is 0.5 m and the velocity is 1 m/s.

- A) 0.4 N
- B) 1 N
- C) 2 N
- D) none of the above

2. Dave and Becky are sledding down a  $15^\circ$  incline. If we assume the friction force is negligible, what is their acceleration?

- A)  $2.5 \text{ m/s}^2$
- B)  $9.5 \text{ m/s}^2$
- C)  $9.8 \text{ m/s}^2$
- D) You must know the mass.

**Physics 2205**  
**Quiz 5—Form B**

21 September, 1999

1. Julie is spinning a yo-yo of mass 0.1 kg on a string in a vertical circle at constant velocity (which would be pretty hard to do). Calculate the difference in the tension in the string between the top and bottom of the circle if the radius is 0.5 m and the velocity is 1 m/s.

- A) 2 N
- B) 1 N
- C) 0.4 N
- D) none of the above

2. Manuel holds a key on a thin chain in his hand while a carnival ride accelerates him horizontally at 0.75 g. What angle will the chain make (from the vertical)?

- A) 37°
- B) 41°
- C) 49°
- D) 53°
- E) you must know the mass of the key