Free Fall Problems Worksheet Name		Name
Physics		Period
1. Ar	ollowing problems, show all work and write the answers in the n object falls from a high building. Ignoring air resistance, what valling?	
	n object falls from a high building and hits the ground in 9.0 secone distance that it fell?	onds. Ignoring air resistance, what is
	uring a tornado in 2008 the Peachtree Plaza Westin Hotel in dov uppose a piece of glass dropped near the top of the hotel falling A. Ignoring air resistance, how long would it take the piece o	215 meters.
	B. Ignoring air resistance, what will the velocity of the piece ground?	of glass be when it strikes the
4. Ar	n object falls from the Transco Tower in Houston and takes 15 so A. What is its velocity at impact if air resistance is ignored?	econds to reach the ground.
	B. How tall is the building?	
	<ul> <li>C. What is its acceleration at the 2<sup>nd</sup> second?</li> <li>D. What is its acceleration at the 5<sup>th</sup> second?</li> <li>E. If the Transco Tower were actually 3,000 meters tall, how off of the top of the building? (ignoring air resistance)</li> </ul>	long would an object take to free-fall

5. Wil-E-Coyote drops a bowling ball off a cliff to try to catch the Roadrunner. The cliff is 132m high.				
	A.	How long does it take the ball to fall to the ground?		
	В.	What is its impact velocity?		
	C.	How far does it fall in the first 3.0 seconds?		
	D.	How fast is it going at the end of 3.0 seconds?		
	E.	How long would it take the same ball to fall if the cliff was on the moon (g	= 1.63 m/s <sup>2</sup> )?	
6.		op your cell phone while in the bathroom in front of the mirror while the welow. If you are 0.45 meters above the sink, how long do you have before your.		