

Free Fall Day 3a

Name: _____

1. If you drop from rest from a 10 m diving platform into the water...

- a) How long will you be in flight?
- b) How fast will you be going when you hit the water?

2. Galileo supposedly dropped a small round rock and a cannon ball from the Leaning Tower of Pisa. The tower is 56 meters tall.

- a) How long did the small ball take to hit?
- b) How long did it take the cannonball to hit?

3. Estimate the fastest speed something could have if dropped in this room. (Hint: this is a two-part problem.)

Free Fall Day 3b

Name: _____

4. If a penny were dropped from the top floor of the new One World Trade Center building (417 m), and if it experienced no drag on the way down...

- a) How much time would it take?
- b) How fast would it be going when it reached the pavement?
- c) Aren't you glad pennies experience a lot of air drag?

5. A rain cloud is 2,200 meters up. If rain experienced no drag on the way down...

- a) How much time would it take to fall?
- b) How fast would it be going when it reached the ground?
- c) Aren't you glad rain drops experience a lot of air drag?