

220 Cannon on a cliff problems

To receive credit for homework:

- Write all answers in your bound journal
- 2pt if you do not title the entry
- 2pt if you do not date the entry

YOU ALSO MUST

- 1) **Diagram each problem**
- 2) **Write down all known variables**
- 3) **Write down the formula you wish to use (Formulas: $D_y=1/2at^2$ $V_y=at$ $V_x=D_x/t$)**
- 4) **Then completely write all of your math problems**
- 5) **BOX your answers**

Problem Set 1:

- 1) A cannon ball is fired from a 221m cliff and lands 50.0m from the bottom. How fast was the cannon ball in horizontal direction moving (V_x)?
- 2) How fast was it moving in the Y-direction when it hit the ground (V_y)?
- 3) The cannon ball is then fired from a 300.0m cliff, how far will it land from the base of the cliff?
- 4) The cannon ball is then fired from a cliff of an unknown height. The cannon ball lands 27.0m from the base of the cliff. How high is the cliff? How fast was the cannon ball moving in the Y-direction when it hit the ground (V_y)?

Problem Set 2:

- 5) A cannon ball is fired from a 75.0m cliff and lands 50.0m from the bottom. How fast was the cannon ball in horizontal direction moving (V_x)?
- 6) How fast was it moving in the Y-direction when it hit the ground (V_y)?
- 7) The cannon ball is then fired from a 300.m cliff, how far will it land from the base of the cliff?
- 8) The cannon ball is then fired from a cliff of an unknown height. The cannon ball lands 76m from the base of the cliff. How high is the cliff? How fast was the cannon ball moving in the Y-direction when it hit the ground (V_y)?

Problem Set 3:

- 9) A cannon ball is fired from a 88.0m cliff and lands 50.0m from the bottom. How fast was the cannon ball in horizontal direction moving (V_x)?
- 10) How fast was it moving in the Y-direction when it hit the ground (V_y)?
- 11) The cannon ball is then fired from a 300.m cliff, how far will it land from the base of the cliff?
- 12) The cannon ball is then fired from a cliff of an unknown height. The cannon ball lands 68.4m from the base of the cliff. How high is the cliff? How fast was the cannon ball moving in the Y-direction when it hit the ground (V_y)?