Quiz 3

Answer all questions on this paper. Show your work.

1. Isaac throws a hammer up into the air and observes (with reasonable certainty) that its height above the ground, measured in feet after t seconds, is given by the expression

$$\text{height} = -16t^2 + 12t + 4.$$

   After how many seconds will the hammer hit the ground?

2. Factor $16y^5 - y$ as much as possible.

3. Mark each statement T (true) or F (false).

   (a) $x^3 + y^3 = (x + y)(x^2 - xy + y^2)$

   (b) $x^2 + y^2 = (x + y)^2$

   (c) $(x - y)^2 = x^2 - 2xy - y^2$

   (d) $(x + y)^3 = (x^2 + 2xy + y^2)(x + y)$