

MATH 141 Calculus 2
Fall 2015
Rectilinear motion

A stone is throw upward at 15m/s from a tower which is 140m high. (Assume the gravitational constant is 10m/s^2 , so the acceleration of the stone is 10m/s^2 downwards throughout.)

- a) Find an expression for the velocity of the stone at time t .
- b) How far is the stone from its original position after 5 seconds?
- c) What is the total distance travelled by the stone in the first 5 seconds?
- d) (Bonus, non-examinable) With what speed does the stone hit the ground?