FP3

An ideal fluid of density 6000 kg/m^3 flows steadily in a hose with a velocity of 5 m/s at an absolute pressure of 0.5 atm. The hose has a uniform radius of 5 cm. It runs out a window and the lower end lies on the ground below the window. The lower end is open to the air, but someone blocks off half of its open area.

a) (2 points) What is the velocity of this fluid immediately outside the end of the hose?

b) (3 points) How far above the ground is the window located?