To find when the rock hits the ground
set \( H(t) = 0 \)
and solve
\[
10t - 1.86t^2 = 0
\]
\[
t \left(10 - 1.86 \right) = 0
\]
so \( t = 0 \) or \( t = \frac{10}{1.86} \approx 5.376 \) seconds.

Other way...
\[
y = \frac{2x}{(x+1)^2} \quad \text{at} \quad (0,0)
\]
\[
f'(a) = \lim_{h \to 0} \frac{f(a+h) - f(a)}{h} = \lim_{h \to 0} \frac{2(h+1)}{(4h)(h)} = 2.
\]

To find the velocity when it hits, find
\[
H'(5.734) = 10 - 3.72(5.734)
\]
\[
= 10 \quad \text{m/s}
\]