4/11/11 An example using momentum $p = mv$

What velocity does a giant turtle have if the turtle's mass is 45 kg and the turtle's momentum is 184 kg-m/sec? Use the five steps.

1a $m = 45\ kg \quad p = 184\ \frac{kg \cdot m}{sec}$

1b $v = ?$

2 $p = mv$

3 $184 = 45v$

4 $\frac{184}{45} = \frac{45v}{45}$

$4.089 = v$

$v =$ 4.089 m/s UP THE WALL

5 $p = mv$

$p = 45(4.089)$

$= 184.005\ \frac{kg\ m}{sec}$ ✓ UP THE WALL