**Homework 2.C**

**Given:** A truck is traveling to the left with a constant speed of $v_T$. A cylindrical tank (of radius $R$) is rolling without slipping to the right, with the center C of the tank having a constant speed of $v_C$.

**Find:** For this problem:

(a) Determine the angular velocity of the tank.

(b) Determine the velocity and acceleration of point A on the tank, where A is directly above C.

(c) Determine the velocity and acceleration of point B on the tank, where B is to the left of C.

Write your answers as vectors.
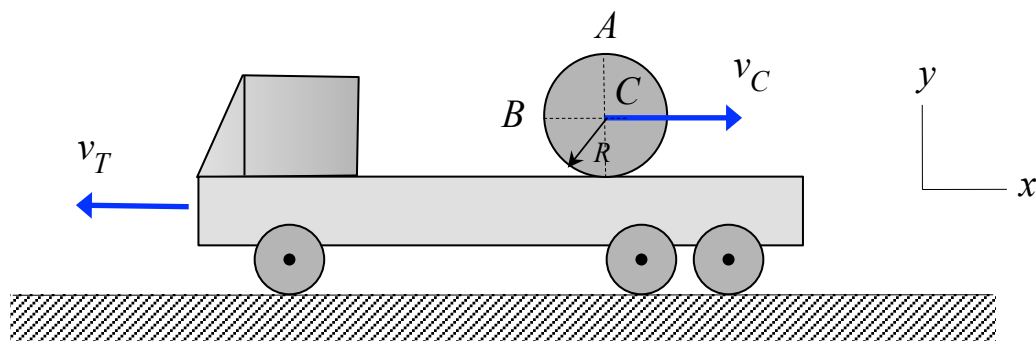


Write your answers in terms of, at most: $R$, $v_T$ and $v_C$.