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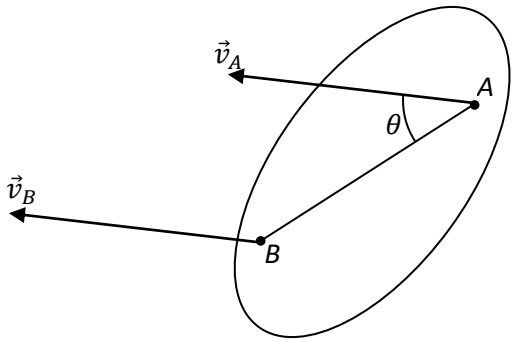
ITU Faculty of Aeronautics and Astronautics **30.11.2015**
Department of Aeronautical Engineering
2015-2016 Fall Term
11230 DNK201E Dynamics EXTRA QUIZ – 2

Problem: Consider the figure below. At all instants in the time interval $t \in [0,\ 10\ s]$ the velocities of points *A* and *B* are equal, $\vec{v}_A = \vec{v}_B$. Can we say that, in this time interval, the motion of the rigid body possibly is

(a) pure rotation,
(b) pure translation,
(c) translation and rotation?



Solution:

	2-Dimensional	3-Dimensional
(a)	No.	No. But yes if $\vec{v}_A = \vec{v}_B = 0$ or $\theta = 90°$.
(b)	Yes.	Yes.
(c)	No.	Yes.