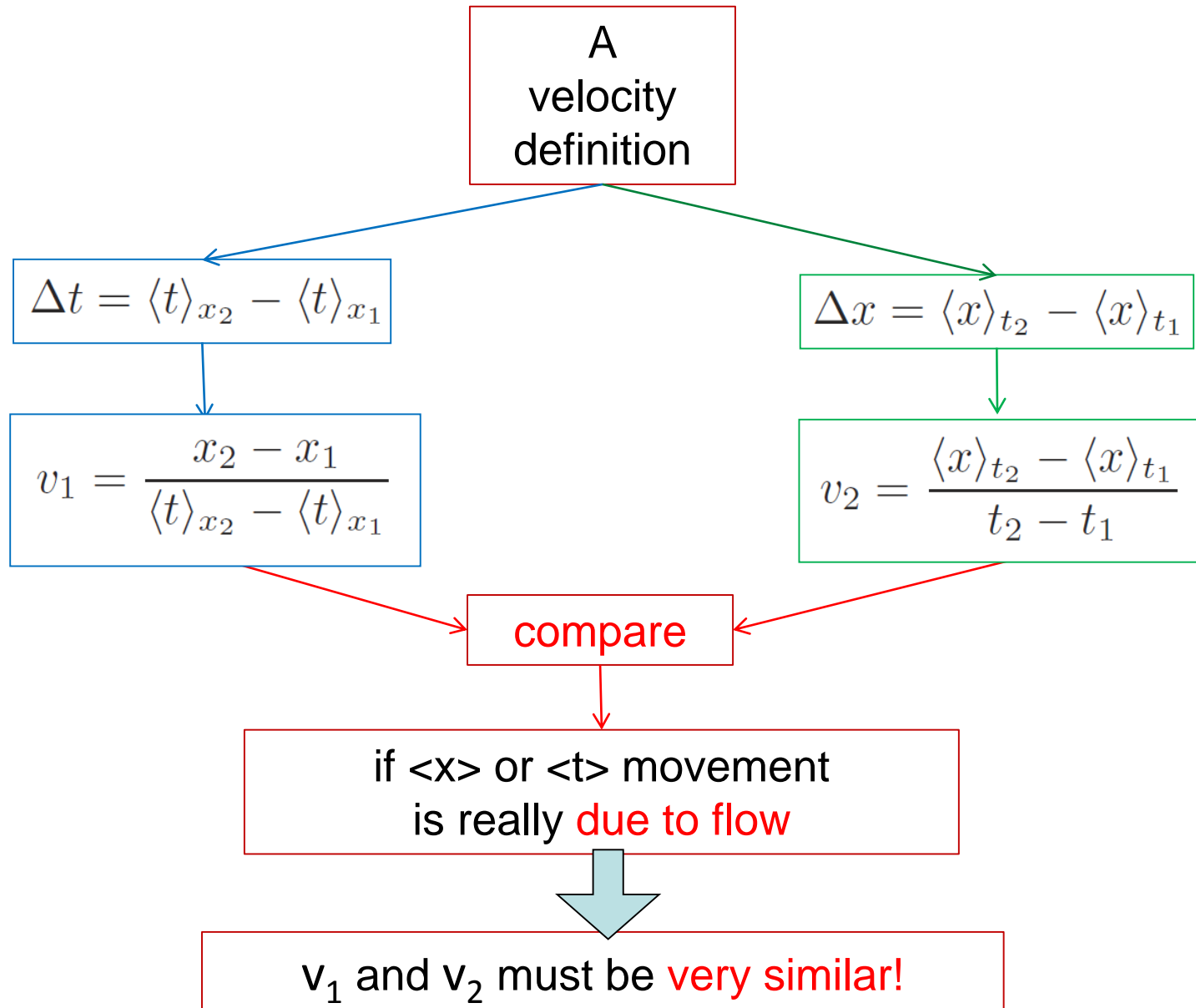
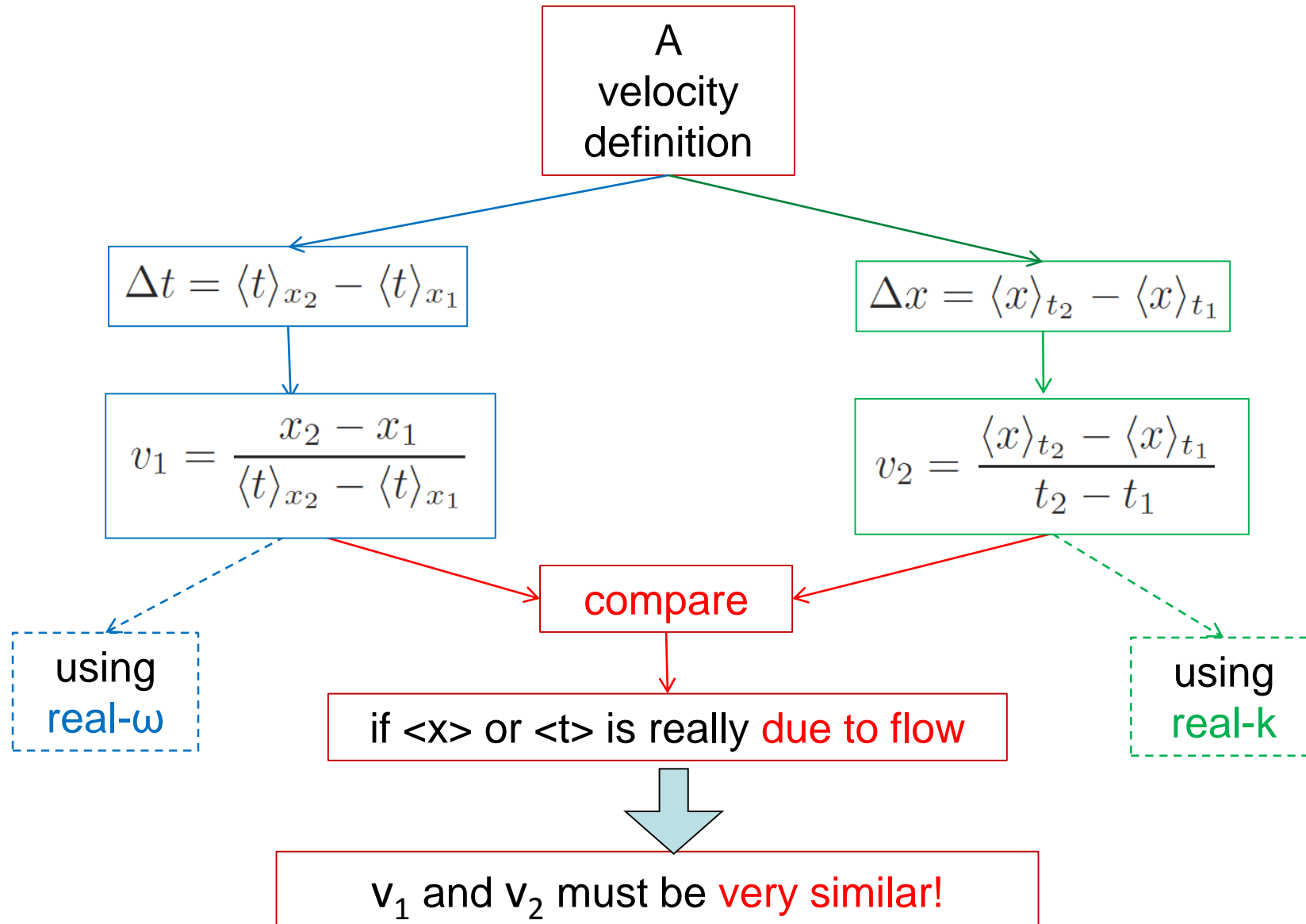


# Method to test velocities



# comparison method



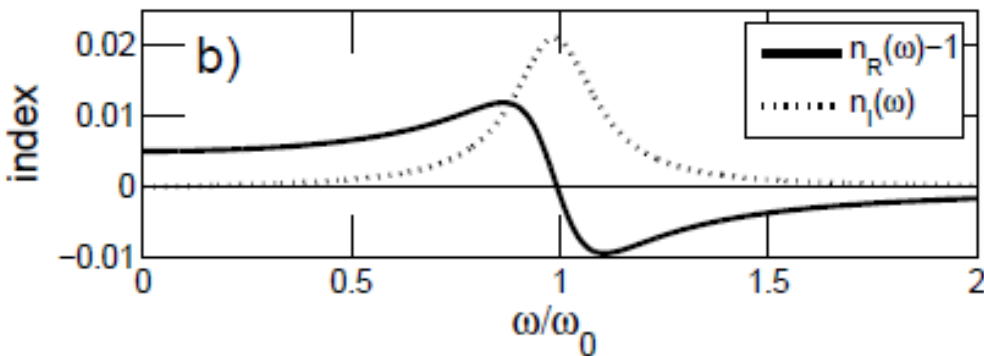
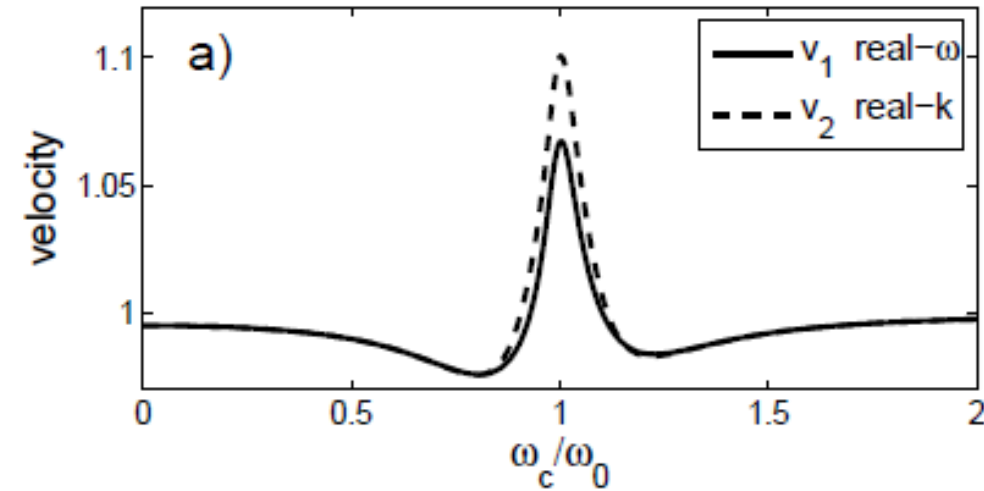
# Comparison of $v_1$ and $v_2$

Gaussian wave-packet

$$U(0,t) = e^{-t^2/\tau^2} \cos(\omega_c t)$$

Luminal regime

$$v_1 \cong v_2$$



at resonance  
( $\omega_c \sim \omega_0$ )

both  
 $v_1$  and  $v_2$   
superluminal

however

$v_1, v_2$   
differs

velocity  
definition

is inconsistent

not  
correspond to  
a real flow

not reliable

not  
signal velocity

values  
measured in  
experiment[1]  
not correspond  
to flow