Consider a S' frame moving with a speed v in 1D with respect to a stationary frame S. Using your everyday intuition, write down the relationship between a position measurement x and x'.

Be ready to explain why this makes sense to you.

The Galilean transformation between S' and S is:

$$x = x' + vt$$

The Lorentz transformation will introduce a γ, where do you think it goes? And why?

I'm in frame S, and you are in is in Frame S', which moves with speed V in the $+x$ direction.

An object moves in the S' frame in the $+x$ direction with speed v_x'. Do I measure its x component of velocity to be $v_x = v_x'$?

A. Yes

B. No

C. ???

I'm in frame S, and you are in is in Frame S', which moves with speed V in the $+x$ direction.

An object moves in the S' frame in the $+y$ direction with speed v'_y. Do I measure its y component of velocity to be $v_y = v'_y$?

A. Yes

B. No

C. ???

With Einstein's velocity addition rule,

$$u = \frac{u' + v}{1 + \frac{u'v}{c^2}}$$

what happens when v is very small compared to c?

A. $u \rightarrow 0$

B. $u \rightarrow c$

C. $u \rightarrow \infty$

D. $u \approx u' + v$

E. Something else

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what happens when u' is c?

A. $u \to 0$

B. $u \to c$

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