X1.0   Prove that the sum of two real numbers is greater than or equal to their maximum if and only if they are both nonnegative.

After trying the question, scroll down to the solution.

§   Proof:

$$a+b \geq a \uparrow b \qquad\qquad \text{generic connection twice}$$

$$= \quad a+b \geq a \ \wedge \ a+b \geq b \qquad\qquad \text{number cancellation twice}$$

$$= \quad a{\geq}0 \ \wedge \ b{\geq}0$$