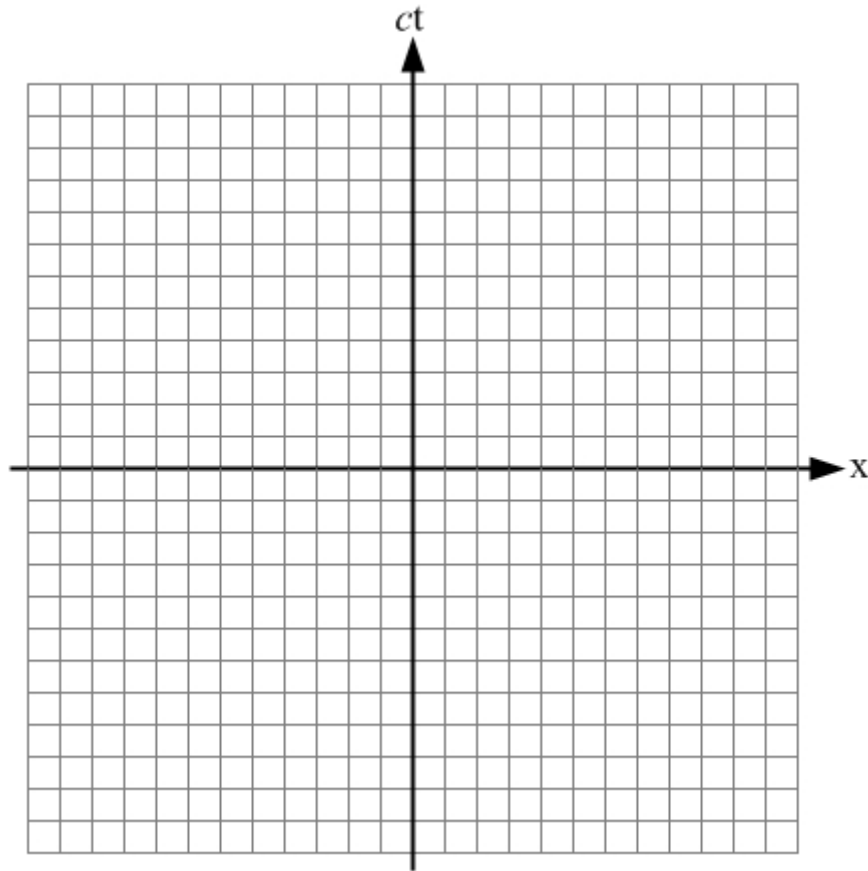


Light Cones

Now let's separate all of space into past, present, future, and unreachable



The origin on the spacetime diagram indicates where you are right now – it represents the Present. If that is your Present identify the region on the diagram that represents all locations you could possibly be in the Future (assume the spacetime diagram is drawn from the reference frame of the chair you are sitting in right now, and let's assume that the chair remains at rest at all times ...but that you do not have to remain in your chair).

Now, on the diagram, identify the region that represents all locations that you could possibly have been in in the Past.

The remaining regions are the unreachable regions where you could never have been in the Past and where you could never be in the Future. Identify these regions on the spacetime diagram.

We usually say that the unreachable regions are separated from the Past and Future by light cones. Explain what we mean by this.