Prior studies have shown that animals learn about time (duration of things). But, is time represented on a relative or absolute scale? In other words if an animal comes to expect and outcome after a fixed time in a cue and the inter trial interval time is doubled, would animals expect the cue time to also double? The objective of this study was to investigate whether time is represented in this relative way. Rats were exposed to 12 seconds cues that preceded food delivery. For half of the subjects, the intertrial interval time was an average of 180 seconds and 360 seconds for the other half. All subjects were then shifted to 24 seconds cues prior to food delivery. Half of the subjects maintained their ITI times. The subject that had longer ITI and the one that had its ITI and its CS increased proportionally, learned quicker than the rest. A long intertrial interval helps animals learn quickly. The results also show that animals also have a relative representation of time.