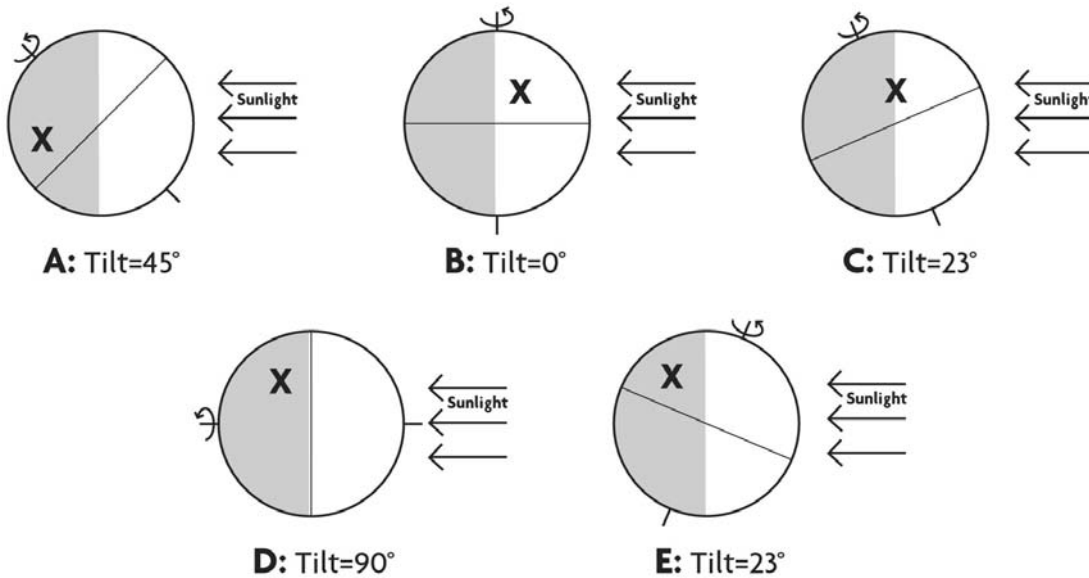


Astronomy Ranking Task: The Seasons

Exercise #5

Description: In the figures (A – E) below parallel beams of sunlight illuminate globes tilted at various angles. Like the Earth, the globes rotate so that an identical point (indicated by an X) on each globe is sometimes in sunlight and sometimes in darkness. Assume that the globes make one full rotation every 24 hours, and that the latitude of each “X” above the equator is the same on each globe.



A. Ranking Instructions: Rank the time (from longest to shortest) that each location spends in daylight during the 24 hour rotation period.

Ranking Order: Longest time 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Shortest time

Or, the time spent in daylight for each location is the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

B. Ranking Instructions: Imagine that at each location (indicated by an X”) a glass of water is warmed by equally bright sunlight during each 24 hour rotation period. Rank the temperatures (from coolest to hottest) of the glasses of water.

Ranking Order: Coolest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Hottest

Or, the temperature of each glass of water is the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:
