

SOLVING TRIGONOMETRIC FUNCTIONS

Activity: Hydro Savings:

Problem: Sandy lives in Toronto. She uses a dusk to dawn timer with her garden lights. She is trying to reduce her hydro costs by unplugging these garden lights for part of the year.

The table below shows the length of day every 30 days for Toronto, ON from 12/31/99 to 3/26/01.

Date	12/31	1/30	3/1	3/31	4/30	5/30	6/29	7/29
Day #	0	30	60	90	120	150	180	210
Length (h)	9.1	9.9	11.2	12.7	14.0	15.0	15.3	14.6

Date	8/28	9/27	10/27	11/26	12/26	1/25	2/24	3/26
Day #	240	270	300	330	360	390	420	450
Length (h)	13.3	11.9	10.6	9.5	9.1	9.7	11.0	12.4

Determine the number of days per year that Sandy's garden lights are on for more than 14 hours. Use the data in the table.