

Section 6.2 - Periodic Functions

Learning Goal:

By the end of today, I will be able to recognize the graph of a period function from a non-periodic function.

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Give five examples of things you "think" have periodic behaviour.

What characteristics make something periodic?

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Slinky Demo (standing wave)

Are there other attributes of periodic functions that we can look for?

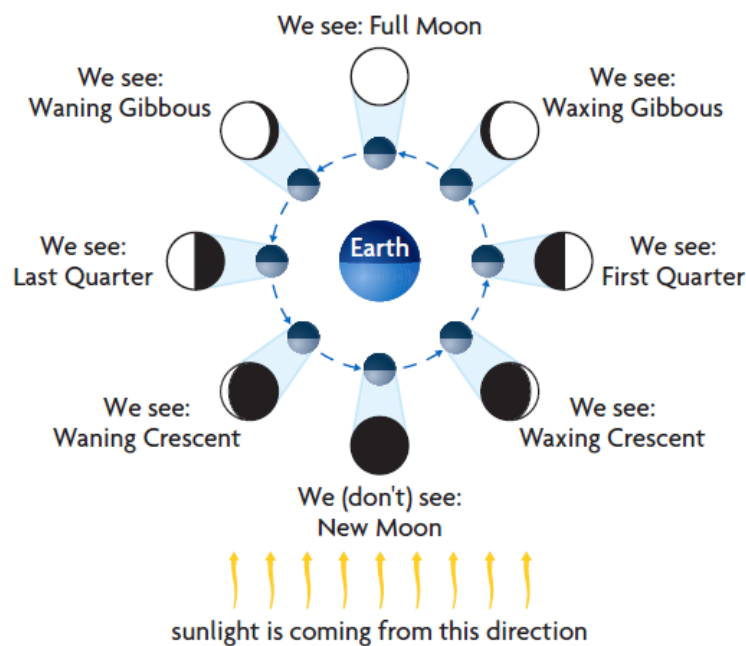
Cycle - one complete pattern

Period - duration for one complete cycle (metres, seconds, etc.)

Amplitude - height of the wave

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The Sun always shines on half the Moon. How much of the Moon we see depends on where it is in its orbit around Earth.



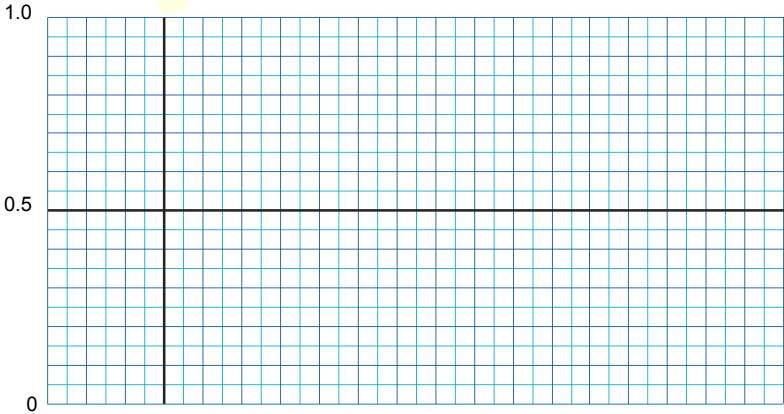
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The tables show the proportion of the Moon that was visible from Southern Ontario on days 1 to 74 in the year 2006.

Day of Year	1	4	7	10	14	20	24	29	34
Proportion of Moon Visible	0.02	0.22	0.55	0.83	1.00	0.73	0.34	0.00	0.28

Day of Year	41	44	48	53	56	59	63	70	74
Proportion of Moon Visible	0.92	1.00	0.86	0.41	0.12	0.00	0.23	0.88	1.00

Set up an appropriate axis and scale, and graph the data

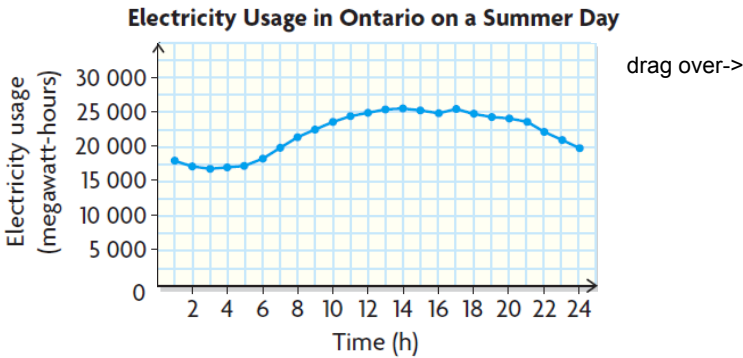


What is the proportion of the moon that is visible on the following days?

- (i) day 30 (ii) day 65 (iii) day 37

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The graph shows the demand for electricity in Ontario on a day in August 2002. Discuss and interpret the graph, and suggest possible reasons for its shape.



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Homework Questions:

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