Applications of Domain and Range
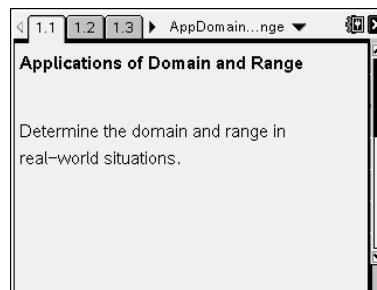## Student Activity

Open the TI-Nspire document *AppDomainRange*.

What can a graph tell you about domain and range? In this
activity, you will apply domain and range to real-world
problems.

Move to page 1.2.

Press (ctrl) ◄ and (ctrl) ► to
navigate through the lesson.

Jessie is parking is parking in a garage for a concert. It costs $6 for the first 2 hours, an additional $3
for each additional hour or fraction of an hour, with a maximum charge of $24 for a day.

1.   In this situation, what represents the domain?

2.   What variable is associated with the range?

3.   What piecewise defined function represents the total cost?

**On page 1.7, graph the equations you determined above. You may need to try several approaches
before finding the correct graph.**

4.   Sketch your graph here.

5.   State the domain and range.

Move to page 2.1.

Peter needs to fill up his truck to drive to and from school next week. If gas costs $2.79 per gallon, and his truck holds a maximum of 28 gallons, analyze the domain, range, and function values through the following questions.

6. In words, what is the domain of the situation? On the graph, where can you find domain?

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8. If Peter purchases zero gallons, what is the cost?

9. If Peter purchases 10 gallons, what is the cost?

10. What is the maximum Peter can spend?

11. Write an equation that models the total cost of the gas.

On page 2.9, graph your equations and determine if they accurately represent the situation. If not, modify and graph again

12. Sketch your graph here.

13. State the domain and range of this situation.

14. Summarize what you have found in this lesson. Explain how and why the domain and range are different between the two examples in this activity.