Chapter 2 – Section 2.2 Domain and Range

TICKET-IN-THE-DOOR

In order to be prepared for class you must watch the module and complete the following activity. This is due first thing when you get to class.

Define

Domain:

Range:

Check your understanding:
1. A used car salesman earns a salary (S) of $100 per week plus a commission of $45 for each car he sells (c). The lot currently has 85 cars on the lot.

   a. **Construct a function** that represents the weekly salary, S, as a function of number of cars sold, c.

   b. What is the **domain** and the **range** of the function in part a? Graph the function on the on the cS-plane to the right.
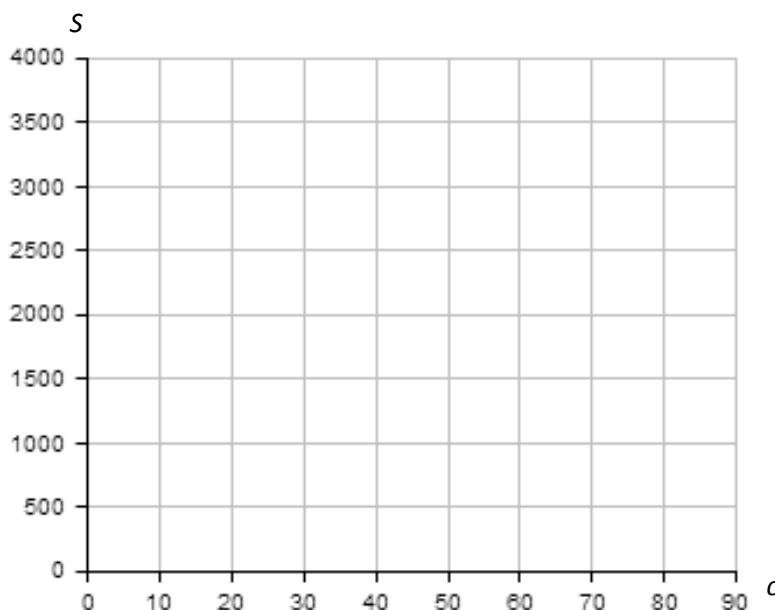
2. What is the **domain** of the function $h(x) = \dfrac{-3}{x^2 + 4}$?

3. What is the **domain** of $y = h(x) = \dfrac{2}{\sqrt{x+a}}$, where a is a positive constant?

4. Assume that height is a function of age and that $H = f(a)$ is the average height (in inches) for females in the US at age a years. What is a "reasonable" **domain** for $H = f(a)$?

5. A model rocket is launched from the roof of a building. For height h, in meters, and time t, in seconds, after the rocket is launched, the height of the rocket above the ground is given by $h = f(t) = -4.9t^2 + 40t + 16$. Interpret the **range** of the graph of $f(t)$.

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