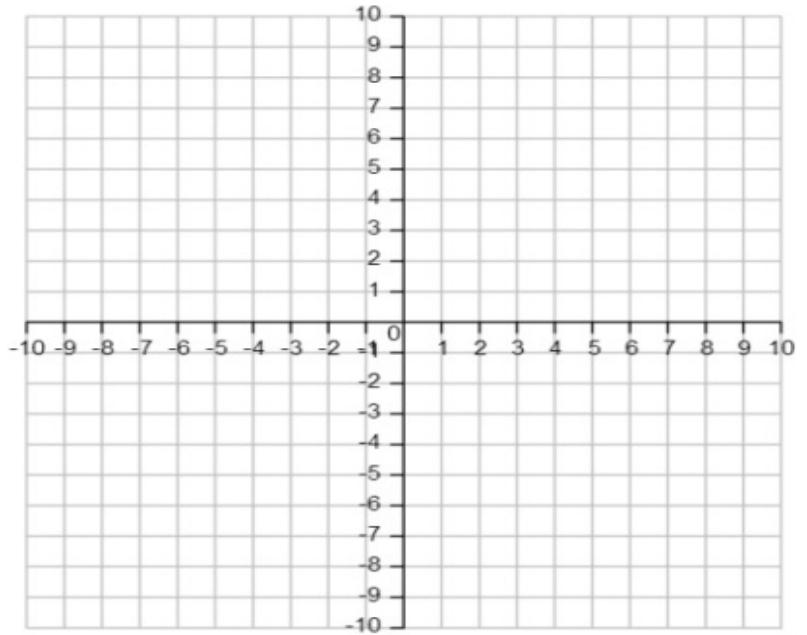Chapter 2 – Section 2.3 Piecewise-Defined Functions

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.
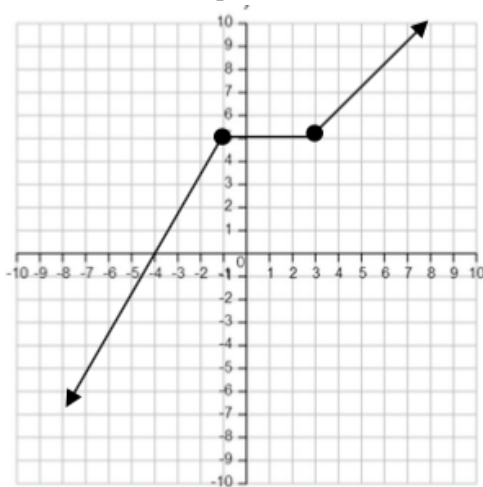
Check your understanding:

1.   Create the graph for the function:

$$f(x) = \begin{cases} -3x & x < -2 \\ 4 - x & -2 \le x \le 3 \\ 2x - 5 & x > 3 \end{cases}$$

2.   Construct the piecewise linear function $f(x)$ for the graph below. You should have <u>three</u> pieces!

3.   A long-distance calling plan charges 99 cents for any call up to 20 minutes in length and 7 cents for each additional minute.

   a.   Construct the **piecewise linear function** for the cost, C, of a call as a function of its length t in minutes.

   b.   State the **domain** and **range** of $C(t)$.

   c.   Graph $C(t)$.