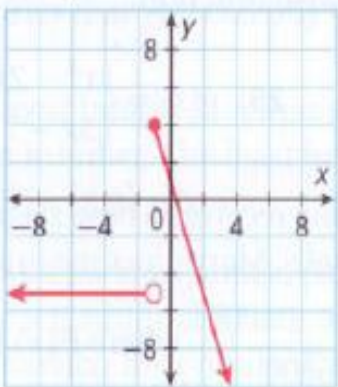
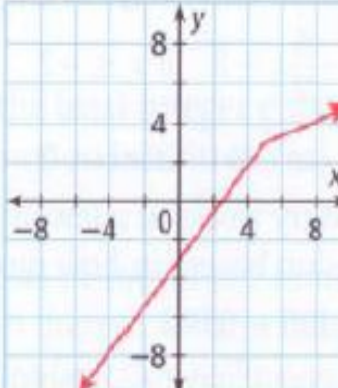
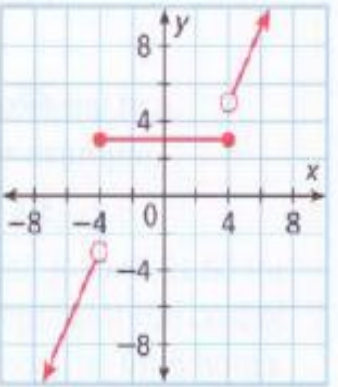


(A) Lesson Objectives:

- a. Introduce piecewise linear functions by means of real world applications
- b. Define piecewise functions
- c. Create graphs of piecewise functions from equations
- d. Write equations of piecewise functions given graphs

(B) Working with Algebraic Examples – HOMEWORK

3. Graph	Equation of the pieces	Domain for the pieces	Piecewise Function
			
			
			

(C) Working with Applications of Piecewise Functions

- a. A museum charges \$40 for a group of 10 or fewer people. A group of more than 10 people will pay \$2.00 per person for the number of people above 10 (in addition to the \$40.00). For example, a group of 15 will pay \$50. The maximum group size is 50 people.
- Draw a sketch that represents this situation. Show key points.
 - Write an equation in the form of $C(p) = \dots ?$
 - What are the domain and range of this cost function

- b. The charge for a taxi ride in New York City is \$10.00 for the first half of a mile and then \$1.50 for each additional quarter of a mile (rounded to the nearest quarter mile.)
- Make a data table showing the cost in dollars (C) of a trip as a function of the distance travelled, in miles (m). So the function will be called $C(m)$
 - What is the cost for a 1.75 mile trip?
 - How far can you go for \$25.00?
 - Sketch the graph, showing key points.

(D) Video Links:

- <http://www.youtube.com/watch?v=-gwffMEr8i8>
- <http://www.youtube.com/watch?v=BxaYyS6lsQ4&feature=relmfu>