Algebra I
Unit 3
01/07-08/16

Lesson 32 – Weave

Learning and Social Objective(s)
1. Students will be able to write a piecewise function.
2. Students will be able to evaluate a piecewise function.
3. Students will attempt the solve the problem individually before working with a peer.

Agenda [103 minutes]
1. Warm-Up 32 [10 min]
2. Pre-Assessment 3 Corrections [15 min]
3. Assignment Log [10 min]
4. Apple Word/Objectives [5 min]
5. Lesson 32 Guided Notes [50 min]
6. Wrap-Up [5 min]

Apple word
◇ Weave: to form by combing various elements or parts into a connected whole.

Scaffolding
◇ Puzzles
  ⸖ Create the border first – find your parameters
  ⸖ Complete parts that follow a pattern or look alike

CFU
◇ Think-Pair-Share, Cold Calling

Homework 32 (Due 01/11/16)
◇ Lesson 32 Guided Notes Homework pages 6-8 #1-6

Lesson 32 Guided Notes

<u>**Warm-Up**</u>
Directions: Complete problems below and be prepared to share your answers. After you finish, write down today's homework from the Daily Bulletin in your Assignment Log.

Jimmy is bicycling to visit a friend. It takes him half an hour to reach his friend's house averaging 20 miles per hour. Jimmy and his friends walk to a park fifteen minutes away. The friends walk 3 miles per hour to and from the park. They sit and talk in the park for an hour before walking back to the friend's house. Since Jimmy is tired, it takes him forty-five minutes to bicycle home at 15 miles per hour.

1.) How long did it take for Jimmy to bicycle to his friend's house?

2.) How long did it take for Jimmy walk to the park?

3.) How long was Jimmy stationary at the park?

4.) How long did it take for Jimmy to walk back from the park?

5.) How long did it take for Jimmy to bicycle home?

Video Notes

1.) What part of the puzzle did the people in the video try to complete first?

2.) How did the people work on the puzzle? Was there a strategy?

3.) Were there any parts of the puzzle that followed a pattern or looked the same?

Puzzle Solving Strategy

<u>Key Notes</u>

A piecewise function is a function that is defined differently for

different _____ intervals in its domain.

Steps for Writing a Piecewise Function
1. Identify the input and output of the function.
2. Find the parameters of the function (find the domain intervals).
3. Find the patterns/equations for each domain.
4. Write the function by writing the patterns/equations for the
   correct domain intervals
5. Adjust equations by checking for continuity along the domain.


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reach his friend's house averaging 20 miles per hour. Jimmy and

his friends walk to a park fifteen minutes away. The friends walk

3 miles per hour to and from the park. They sit and talk in the

park for an hour before walking back to the friend's house. Since

Jimmy is tired, it takes him forty-five minutes to bicycle home at

15 miles per hour.

1.) How fast did Jimmy bicycle to his friend's house?

2.) How fast did Jimmy walk to the park?

3.) How fast was Jimmy moving in the park?

4.) How fast did Jimmy walk back from the park?

5.) How fast did Jimmy bicycle home?

Example 1

Example 2

Write a piecewise-defined function for the graph, including the domain for each part.
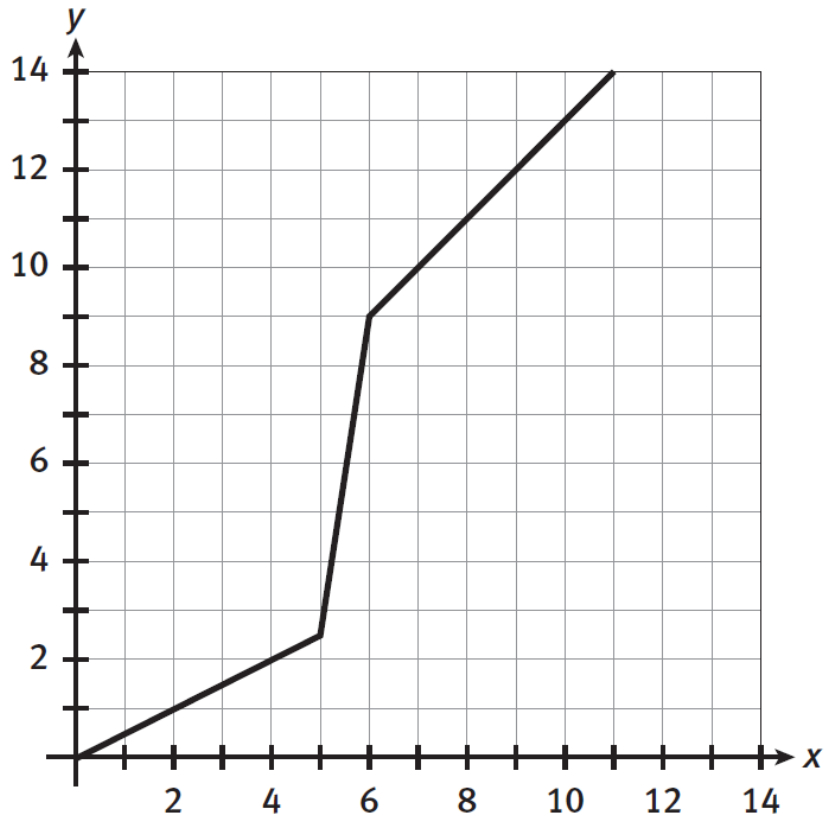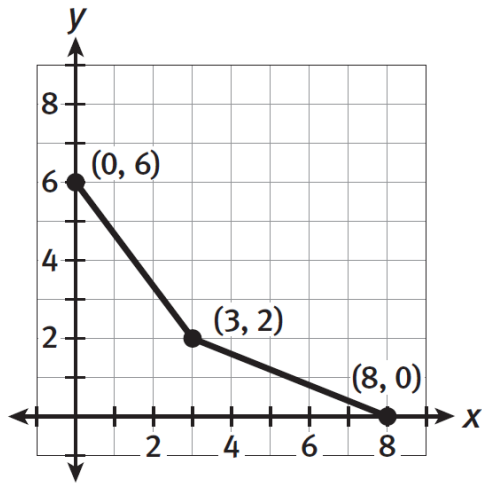

Example 3

Evaluate the piecewise function above at $x = 7$.

Evaluate the piecewise function above at $x = 9$.

Homework 32

1.) Speed Cell Wireless offers a plan of $40 for the first 400 minutes, and an additional $0.50 for every minute over 400. Let t represent the total talk time in minutes. Write a piecewise-defined function to represent the cost $C(t)$.

2.) If Pam works more than 40 hours per week, her hourly wage for every hour over 40 is 1.5 times her normal hourly wage of $7. Write a piecewise-defined function that gives Pam's weekly pay $P(h)$ in terms of the number of hours h that she works.

3.) Write a piecewise-defined function for the graph shown.

4.) Evaluate the piecewise function above at $x = 2$.

5.) Evaluate the piecewise function above at $x = 5$.

6.) Ashley participated in a triathlon.
- She swam for 10 minutes at a rate of 40 meters/min.
- Then she biked for 40 minutes at a rate of 400 meters/min.
- Finally, she ran for 25 minutes at a rate of 200 meters/min.

Write a piecewise-defined function expressing the distance $d(t)$ in meters that Ashley traveled as a function of time t in minutes.