Unit 5, Lesson 7

Slopes of Segments

Let's look at slopes again.

7.1 Math Talk: Evaluating Fractions

Evaluate mentally.

- $\frac{102 - 96}{45 - 42}$
- $\frac{-8 - 4}{6 - 2}$
- $\frac{31 - 18}{5 - 10}$
- $\frac{4 - 9}{12 - 18}$

7.2 Connect the Dots

1. Find the slope of the line that connects the given points.

   a. $(0, 0)$ and $(3, 2)$

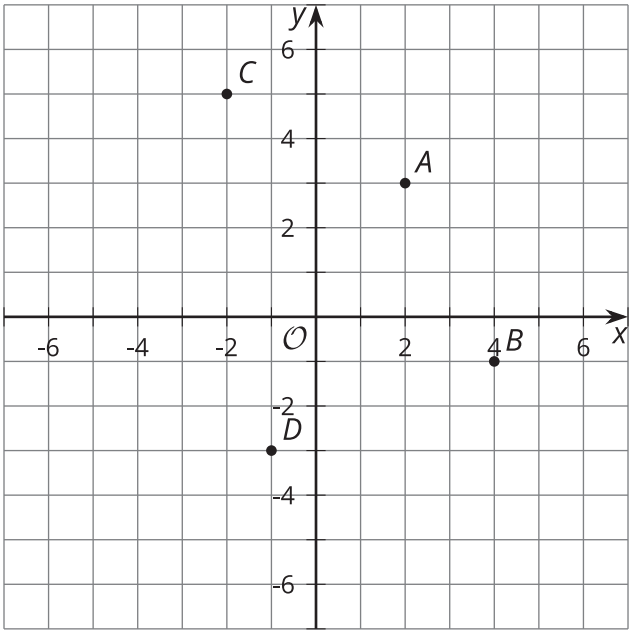
   b. $(4, 2)$ and $(10, 7)$

   c. $(1, -2)$ and $(2, 5)$

   d. $(-3, 4)$ and $(-5, -2)$

   e. $(8, 3)$ and $(10, -9)$

2. For each pair of points, find the slope of the line that goes through the 2 points.



a. A and B

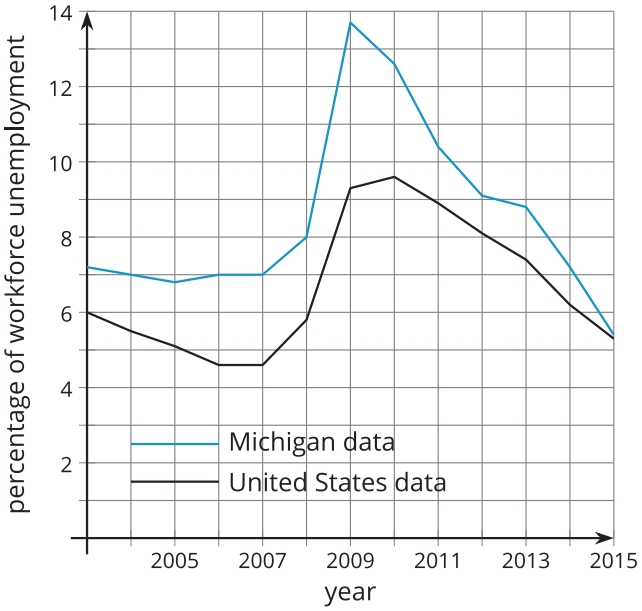
b. A and D

c. B and C

d. C and D

7.3 Ups and Downs

The graph and table represent the same data about the percentage of the workforce unemployment in Michigan and the United States for the years 2003 to 2015.



Year	Michigan	United States
2003	7.2	6
2004	7	5.5
2005	6.8	5.1
2006	7	4.6
2007	7	4.6
2008	8	5.8
2009	13.7	9.3
2010	12.6	9.6
2011	10.4	8.9
2012	9.1	8.1
2013	8.8	7.4
2014	7.2	6.2
2015	5.4	5.3

1. What do the slopes of the segments connecting points for consecutive years mean?

2. Find the slope of the segment between 2004 and 2005 for unemployment in Michigan.

3. Between what 2 years is the slope for the United States unemployment percentage greatest?

   a. Explain your reasoning using the graph.

   b. Explain your reasoning using the table.

4. Between what 2 consecutive years is the slope for the United States unemployment percentage the least? Explain or show your reasoning.