## Unit 4 Lesson 7: Slopes of Segments

### 1 Math Talk: Evaluating Fractions (Warm up)

#### Student Task Statement

Evaluate mentally.

$\frac{102−96}{45−42}$

$\frac{-8−4}{6−2}$

$\frac{31−18}{5−10}$

$\frac{4−9}{12−18}$

### 2 Connect the Dots

#### Student Task Statement

1. Find the slope of the line that connects the given points.
	1. $\left(0,0\right)$ and $\left(3,2\right)$
	2. $\left(4,2\right)$ and $\left(10,7\right)$
	3. $\left(1,-2\right)$ and $\left(2,5\right)$
	4. $\left(-3,4\right)$ and $\left(-5,-2\right)$
	5. $\left(8,3\right)$ and $\left(10,-9\right)$
2. For each pair of points, find the slope of the line that goes through the 2 points.
* 
	1. $A$ and $B$
	2. $A$ and $D$
	3. $B$ and $C$
	4. $C$ and $D$

### 3 Ups and Downs

#### Student Task Statement



| 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 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?
	1. Explain your reasoning using the graph.
	2. Explain your reasoning using the table.
4. Between what 2 years is the slope for the United States unemployment percentage the least? Explain or show your reasoning.



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