

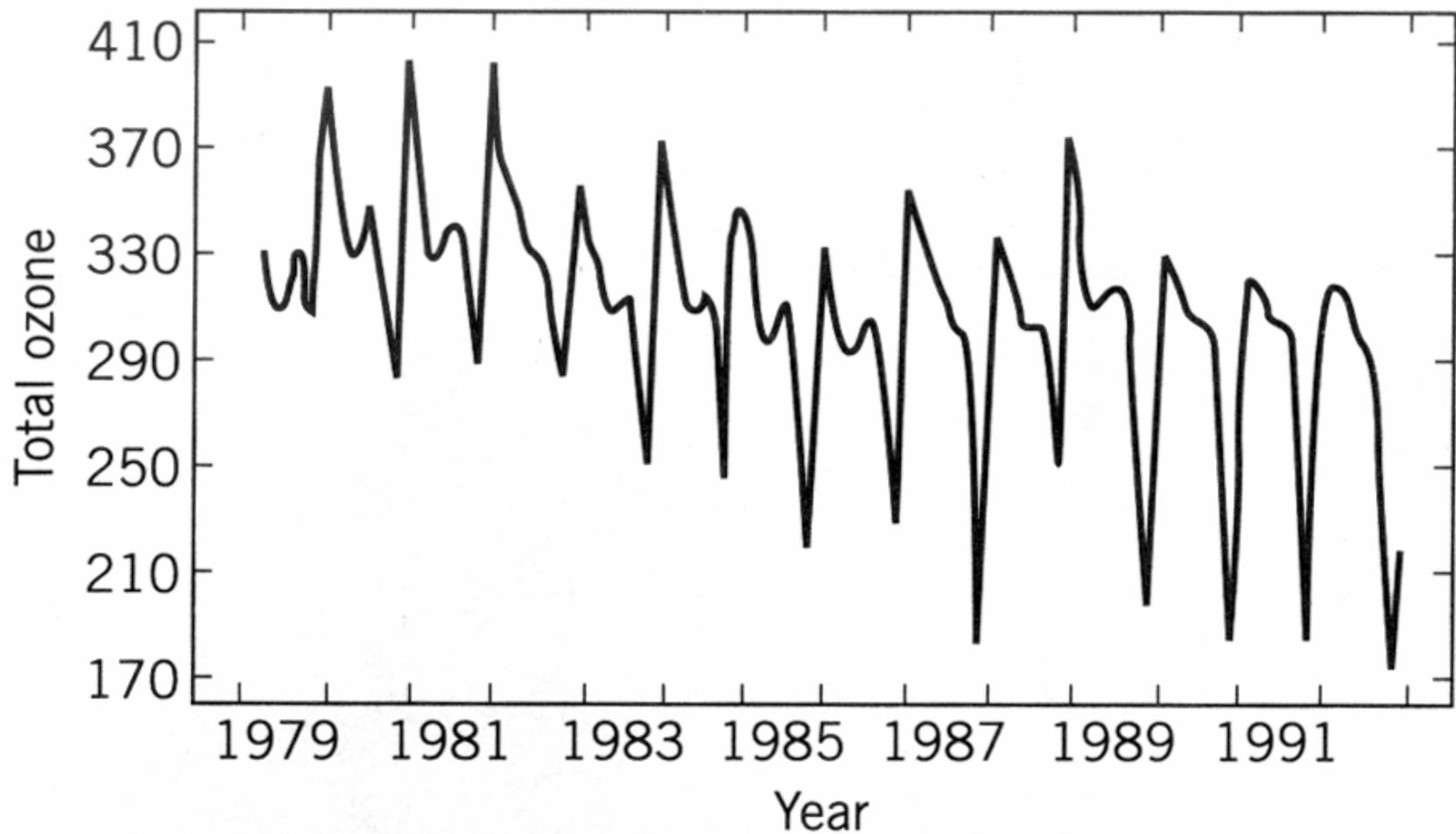
Engaging Students through Interactive Lectures

Gregory Hancock, College of William and Mary

Overview

- example execution of think-pair-share
- how to construct think-pair-share exercises
- benefits and drawbacks
- critical suggestions for success

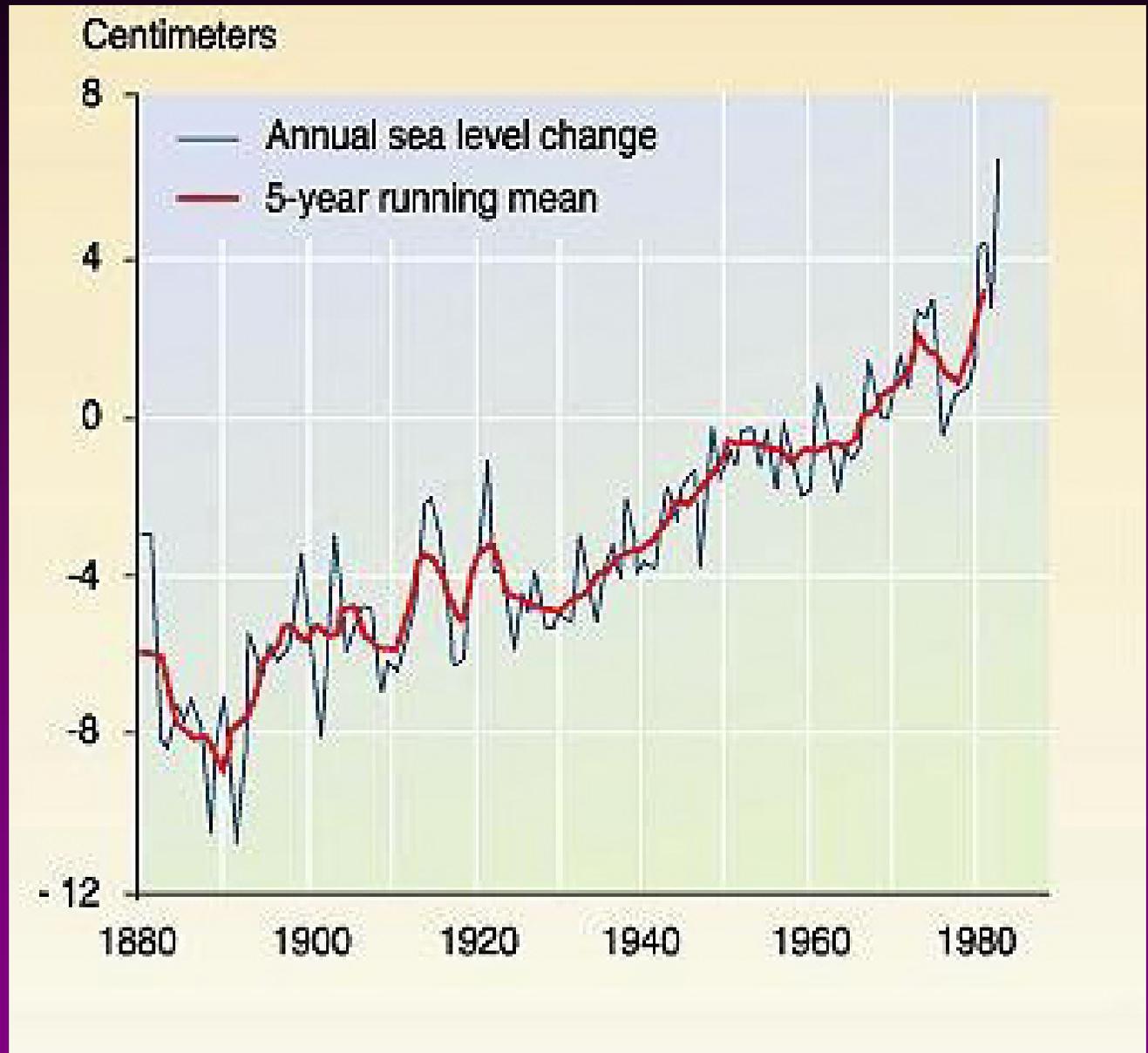
Satellite measurements of ozone concentration above Antarctica, 1979-1992



Executing think-pair-share exercises

- Locate appropriate places in lecture for think-pair-share
- Ask each person to consider question(s)
- Form groups to discuss (2-3 students)
- Solicit group responses as a class
- Students evaluate responses
- Clarify incorrect answers or misconceptions

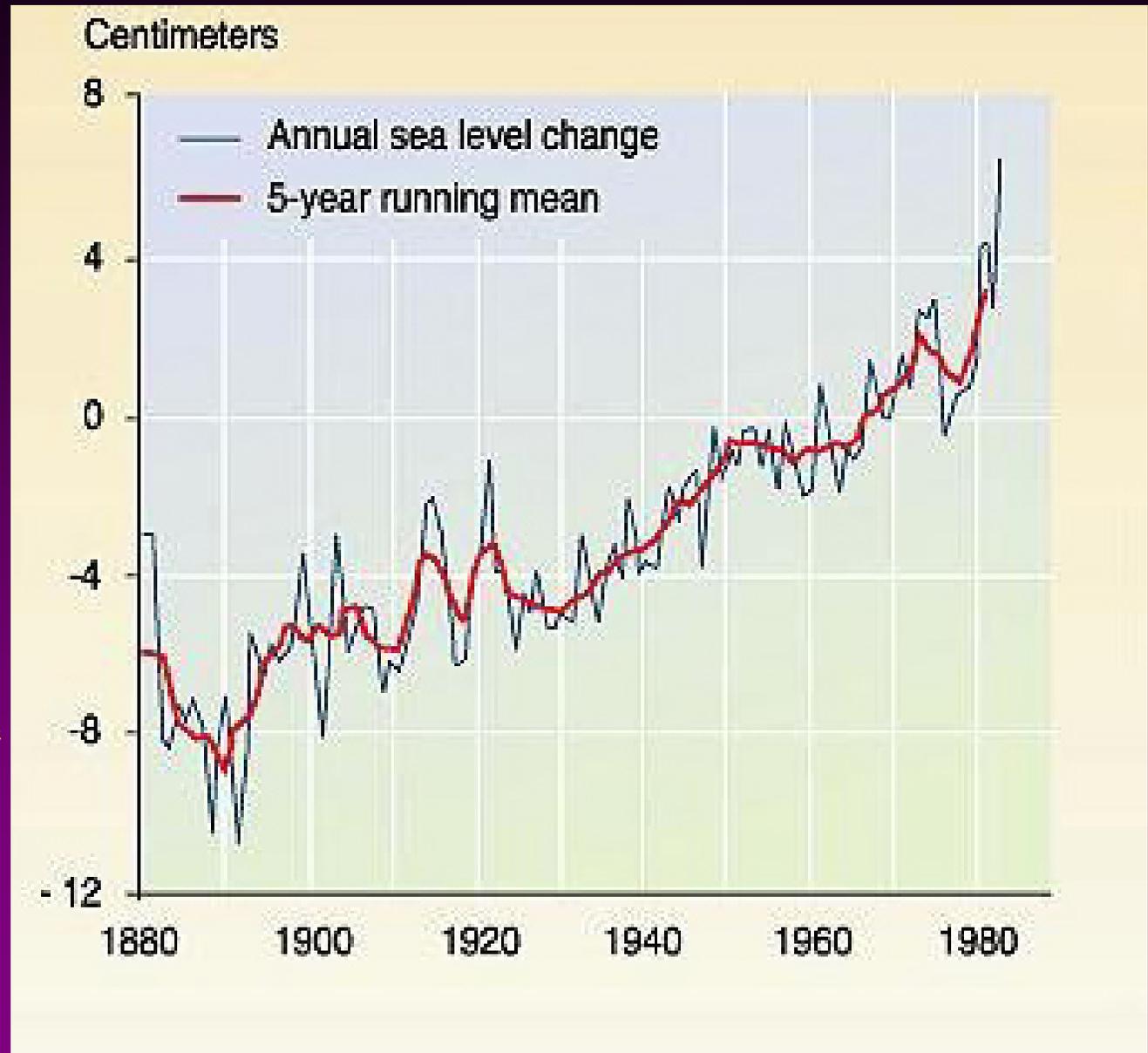
Global sea level over the last century



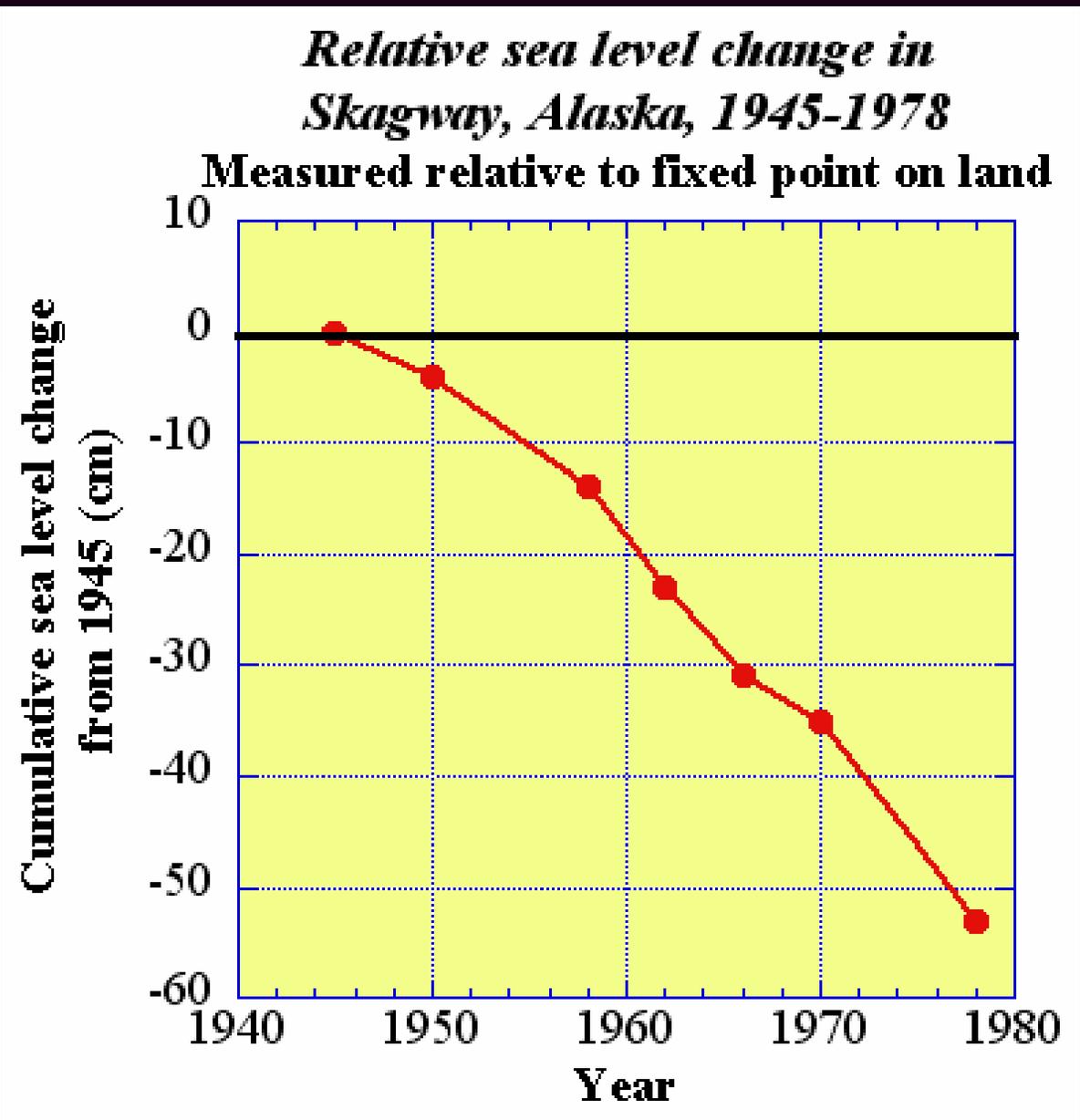
Global sea level over the last century

A) What is the direction of sea level change?

B) What is the rate of sea level change?



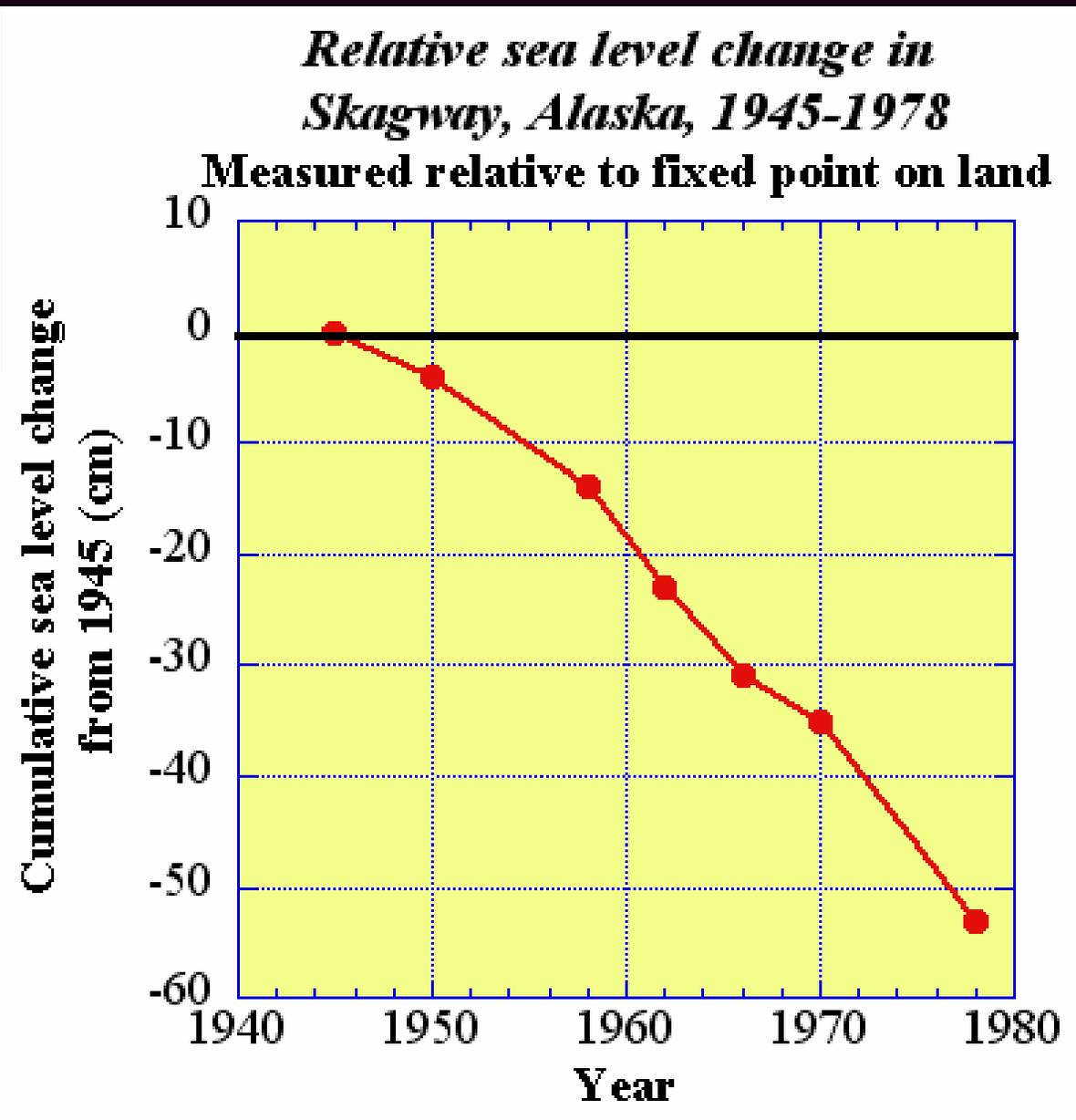
Some data from
Skagway, Alaska,
to ponder....



Some data from
Skagway, Alaska,
to ponder....

A) What is the
direction of sea
level change?

B) What is the rate
of sea level
change?



Benefits of think-pair-share

- Simple, effective way to engage students
- Provides time for everyone to develop answers, and more students can be right
- Students talk science
- Stimulates additional questions
- Doesn't take much additional prep time (in fact, might save you some...)

Drawbacks of think-pair-share

- Requires more class time than straight lecture (?)
- Professor must give up a bit of control (?)
- Exercise may fall flat

Suggestions for think-pair-share success

- Make it part of the routine
- Avoid trivial or overly complicated exercises
- Plan questions and select materials carefully
- Eavesdrop to evaluate progress
- Collect answers from time to time