

## 6.5 Analyzing and Sketching Graphs

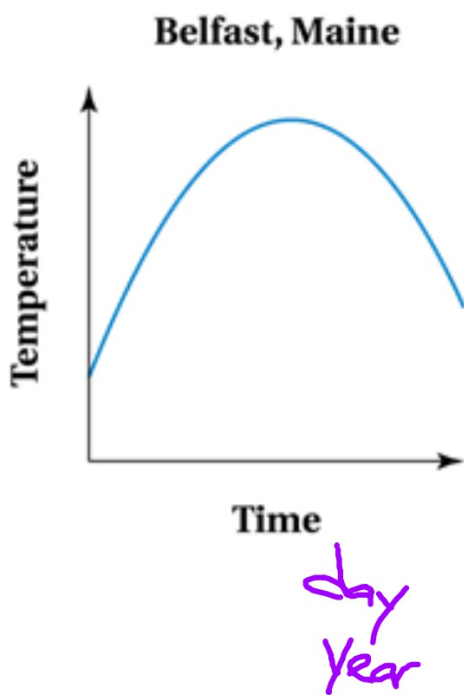
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### Learning Targets

- Interpret the slope of a graph
- Compare graphs
- Match a graph to a situation
- Sketch a graph given a situation

## Interpreting The Slope of a Graph

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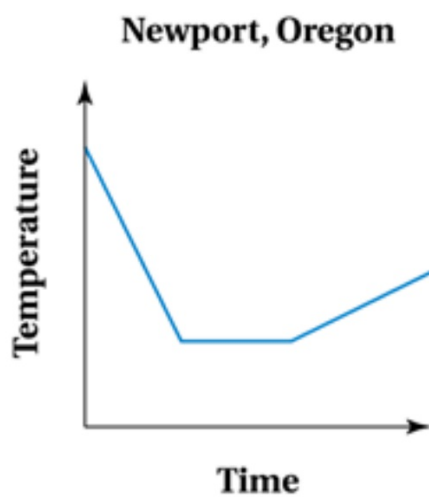


**Describe the change in Temperature.**

**Belfast:** The temperature increases at the beginning of the day. Then the temperature begins to decrease at a faster and faster rate for the rest of the day.

## Interpreting The Slope of a Graph

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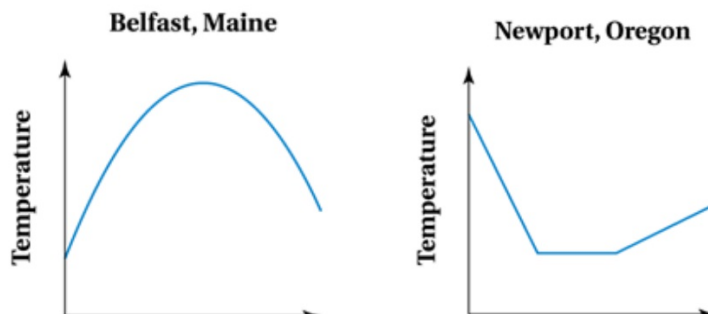
**Describe the change in Temperature.**

**Newport:** The temperature decreases at a constant rate at the beginning of the day. Then the temperature stays the same for a while before increasing at a constant rate for the rest of the day.

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## Comparing Graphs

Make 3 Comparisions from the Graphs.

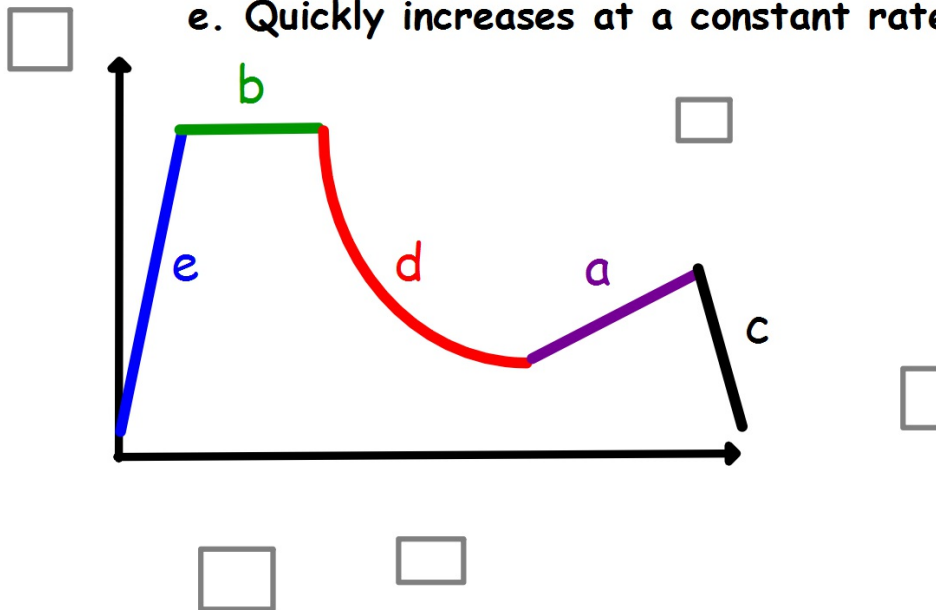


Three possible comparisons follow:

- Both graphs show increasing and decreasing temperatures.
- Both graphs are nonlinear, but the graph of the temperatures in Newport consists of three linear sections.
- In Belfast, it was warmer at the end of the day than at the beginning. In Newport, it was colder at the end of the day than at the beginning.

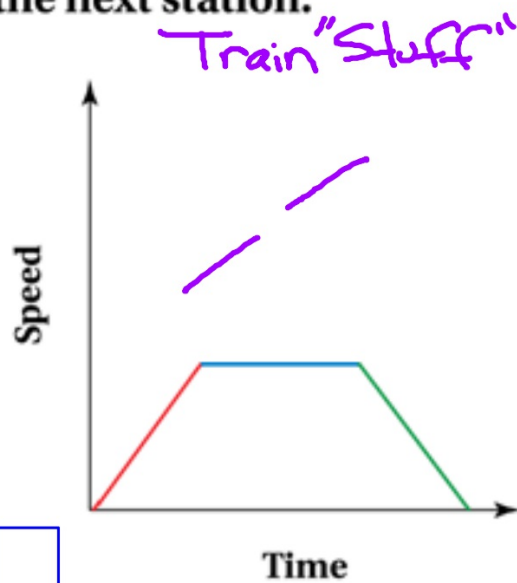
## Matching Graphs to a Situation

- a. Slowly increases at a constant rate
- b. Stays the same
- c. Quickly decreases at a constant rate
- d. Decreases at a decreasing rate
- e. Quickly increases at a constant rate



## Sketching a Graph Given a Situation

A stopped subway train gains speed at a constant rate until it reaches its maximum speed. It travels at this speed for a while, and then slows down at a constant rate until it reaches the next station.



*A stopped subway train gains speed at a constant rate ...*

*until it reaches its maximum speed. It travels at this speed for a while, ...*

*and then slows down at a constant rate until coming to a stop at the next station.*

**Homework**

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**#1-6, 10-18**

**Add Study Guide Notes  
for 6.3 and 6.4**