

33. **REASONING** The point  $(-1, 8)$  is on a line that has a slope of  $-3$ . Is the point  $(4, -7)$  on the same line? *Explain* your reasoning.
34. **WRITING** Is a line with undefined slope the graph of a function? *Explain*.
35. **CHALLENGE** Given two points  $(x_1, y_1)$  and  $(x_2, y_2)$  such that  $x_1 \neq x_2$ , show that  $\frac{y_2 - y_1}{x_2 - x_1} = \frac{y_1 - y_2}{x_1 - x_2}$ . What does this result tell you about calculating the slope of a line?

## PROBLEM SOLVING

### EXAMPLE 6

on p. 238  
for Exs. 36–37

36. **OCEANOGRAPHY** Ocean water levels are measured hourly at a monitoring station. The table shows the water level (in meters) on one particular morning. *Describe* the rates of change in water levels throughout the morning.

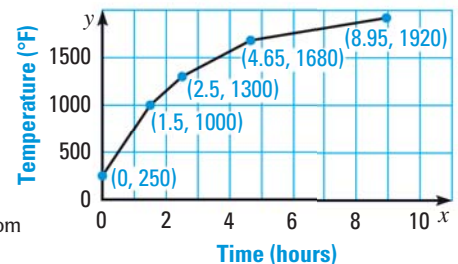
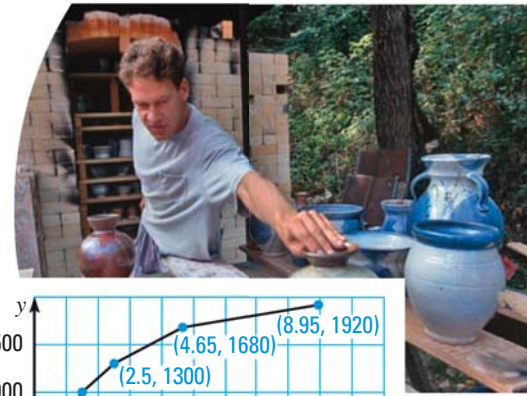
<b>Hours since 12:00 A.M.</b>	1	3	8	10	12
<b>Water level (meters)</b>	2	1.4	0.5	1	1.8

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37. **MULTI-STEP PROBLEM** Firing a piece of pottery in a kiln takes place at different temperatures for different amounts of time. The graph shows the temperatures in a kiln while firing a piece of pottery (after the kiln is preheated to  $250^\circ\text{F}$ ).

- Determine the time interval during which the temperature in the kiln showed the greatest rate of change.
- Determine the time interval during which the temperature in the kiln showed the least rate of change.

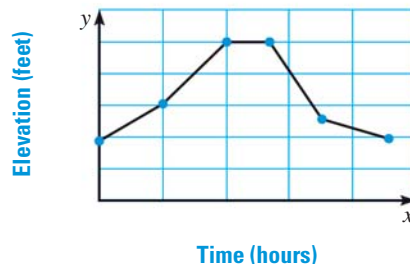
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### EXAMPLE 7

on p. 238  
for Exs. 38–39

38. **FLYING** The graph shows the altitude of a plane during 4 hours of a flight. Give a verbal description of the flight.



39. **HIKING** The graph shows the elevation of a hiker walking on a mountain trail. Give a verbal description of the hike.

