

Name

7-1

Lesson Master

Questions on SPUR Objectives
See Student Edition pages 462–465 for objectives.

SKILLS

Objective A

1. Let f be the function defined by $f(x) = 3x^2 - x$. Find the average rate of change of f over the given interval.
- a. $0 \leq x \leq 2$ _____ b. $[-3, 1]$ _____ c. from 4 to $4 + \Delta x$ _____
2. a. Find the average rate of change of the function g with equation $g(x) = 5 - x^2$ over the interval from x to $x + \Delta x$. _____
- b. Use your answer to Part a to find the average rate of change of g from 2 to 2.1. _____

USES

Objective D

In 3 and 4, use the table below of high temperatures in Santa Fe, NM, for the month of May, 2009.

Day of May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
High Temp. (°F)	75	64	66	72	73	81	81	79	73	79	79	81	79	75	79	66
Day of May	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
High Temp. (°F)	75	81	79	75	70	59	57	59	70	63	59	70	73	73	72	

3. Find the average rate of change in high temperature in Santa Fe over the given intervals. Include units in your answers.
- a. from May 1 to May 31 _____ b. from May 5 to May 7 _____
- c. from May 15 to May 16 _____ d. from May 22 to May 28 _____
4. True or False.
- a. Your answer to Question 3a indicates that, on the average, the high temperature in Santa Fe decreased by less than a degree per day during the month of May 2009. _____
- b. Your answer to Question 3a indicates that the high temperature in Santa Fe decreased every day during the month of May 2009. _____

REPRESENTATIONS

Objective G

In 5 and 6, refer to the graph of a function t at the right.

5. a. Find the slope of the line through points B and D . _____
- b. This slope is the average rate of change of t over what interval? _____
6. What is the average rate of change of t over $1 \leq x \leq 2$? _____

