

# Chapter 2 Section 4

## MA1032 Data, Functions & Graphs

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## Example

The population of the town of Jonesville has a population of 15,000 people in 1980 and grows by 200 citizens every year. A table for the population,  $P$ , as a function of time,  $t$  (in years since 1980) is given below.

$t$	0	1	2	5	10
$P = f(t)$	15,000	15,200	15,400	16,000	17,000

Find a formula for the population in year  $t$ .

# A New Perspective

$P$	15,000	15,200	15,400	16,000	17,000	30,000
$t = f^{-1}(P)$	0	1	2	5	10	75

## Exercise #17

The cost,  $C$ , in thousands of dollars, of producing  $q$  kg of a chemical is given by  $C = f(q) = 100 + 0.2q$ . Find and interpret

- $f(10)$
- $f^{-1}(200)$
- $f^{-1}(C)$

# Summary

- Concept
- Finding the Formula