

Functions

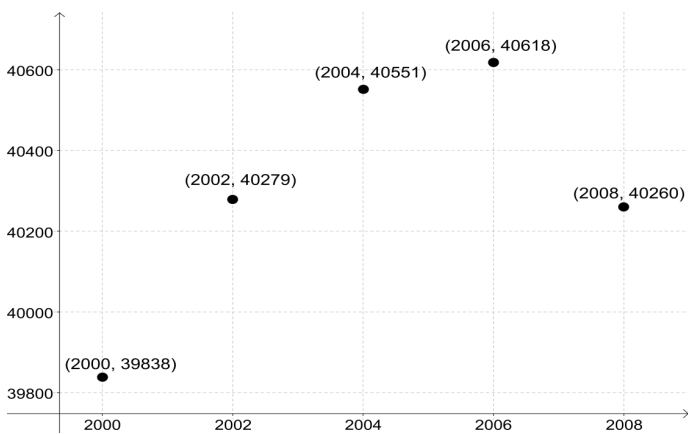
Definition: A function is a mathematical rule which assigns to each input value an output value.

Example: The following table gives the city of Holyoke's population from 2000 to 2008

Year	2000	2002	2004	2006	2008
Pop.	39838	40279	40551	40618	40260

Domain =

Range =



Example: Suppose that gas costs \$3.55 per gallon. The cost to fill our gas tank is a function of how many gallons are needed.

How much does it cost to purchase 10 gallons of gas?

Definition: A function $y=f(x)$ is an increasing function if y increases as x increases.

Definition: A function $y=f(x)$ is a decreasing function if y decreases as x increases.