

Comparing Pizzas

A pizzeria sells a rectangular 18" by 24" pizza for the same price as its large round pizza (24" diameter). If both pizzas are of the same thickness, which option gives the most pizza for the money?



Visualizing Galileo's Gravity Experiments

Galileo Galilei (1564–1642) spent a good deal of time rolling balls down inclined planes carefully recording the distance they traveled as a function of elapsed time. His experiments are commonly repeated in physics classes today, so it is easy to reproduce a typical table of Galilean data.

| | | | | | | | | | |
|----------------------------|---|------|---|------|----|-------|----|-------|----|
| Elapsed time (seconds) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Distance traveled (inches) | 0 | 0.75 | 3 | 6.75 | 12 | 18.75 | 27 | 36.75 | 48 |

What graphical model fits the data? Can you find an algebraic model that fits?

Table 1.1 The Minimum Hourly Wage

| Year | Minimum Hourly Wage (MHW) | Purchasing Power in 1996 Dollars |
|------|---------------------------|----------------------------------|
| 1955 | 0.75 | 4.39 |
| 1960 | 1.00 | 5.30 |
| 1965 | 1.25 | 6.23 |
| 1970 | 1.60 | 6.47 |
| 1975 | 2.10 | 6.12 |
| 1980 | 3.10 | 5.90 |
| 1985 | 3.35 | 4.88 |
| 1990 | 3.80 | 4.56 |
| 1995 | 4.25 | 4.38 |
| 2000 | 5.15 | 4.69 |
| 2005 | 5.15 | 4.15 |

Source: www.infoplease.com

(a) In what five-year period did the actual MHW increase the most?

(b) In what year did a worker earning the MHW enjoy the greatest purchasing power?

(c) A worker on minimum wage in 1980 was earning nearly twice as much as a worker on minimum wage in 1970, and yet there was great pressure to raise the minimum wage again. Why?