Algebra II

V-1

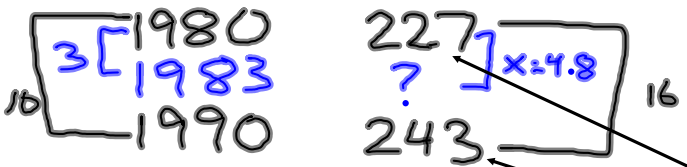
Linear Interpolation

Approximate the population of the United States in each year. (pg 394)

Year	U.S. Population (millions)
1900	76
1910	92
1920	106
1930	123
1940	132
1950	151
1960	179
1970	203
1980	227
1990	243

*1) 1983

≈ 232 million



$\left(\frac{3}{10} = \frac{x}{16}\right)80$

$\frac{24}{5} = \frac{5x}{5}$

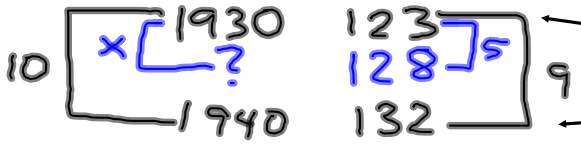
$4.8 = x$ → Add 4.8 to 227 million

Approximate the year in which the population was (in millions)

Year	U.S. Population (millions)
1900	76
1910	92
1920	106
1930	123
1940	132
1950	151
1960	179
1970	203
1980	227
1990	243

*2) 128

1935



$\left(\frac{x}{10} = \frac{5}{9}\right)10$

$x = \frac{50}{9} \approx 5.\overline{5}$

Even though 5.555 rounds up, it is still in the same year, so 1935

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1–16 all