

① An inference is based on data or reasoning, but a guess may not be.

② $\frac{5}{45} = \frac{x}{275}$

$$\begin{array}{r} 45x \approx 1375 \\ \hline 45 \end{array}$$

$$x = 30.5$$

$$x \approx 31$$

③ $\frac{17}{40} = \frac{x}{250}$

$$\begin{array}{r} 40x \approx 4250 \\ \hline 40 \end{array}$$

$$x \approx 106$$

④ $\frac{10}{28} = \frac{x}{443}$

$$\begin{array}{r} 28x \approx 4430 \\ \hline 28 \end{array}$$

$$x \approx 158$$

⑤ mean age ≈ 22

The mean age of the sample is about 22, so the mean age of the visitors to the park should be about 22.

⑥ $\frac{16}{30} \approx 53\%$ The percent of visitors to the park under the age of 18 in the sample is about 53%, so the percent of all visitors should be about 53%.

⑦ $\frac{6}{30} = 20\%$ The percent of visitors to the park who are 35 and over is 20% ^{in the sample}, so the percent of all visitors 35 and over should be 20%.

⑧ about 16 The median age of visitors to the park in the sample is about 16, so the median age of all visitors should be about 16.

⑨

1. 1 = 1
2. 2 = 4
3. 7 = 21
4. 4 = 16
5. 4 = 20
6. 2 = 12
$\frac{20}{20} \quad \frac{74}{74}$
$\frac{37}{20} \overline{) 74}$

②

1. 1 = 1
2. 1 = 2
3. 4 = 12
4. 10 = 40
5. 1 = 5
6. 3 = 18
$\frac{20}{20} \quad \frac{78}{78}$
$\frac{39}{20} \overline{) 78}$

③

1. 0 = 0
2. 5 = 10
3. 8 = 24
4. 3 = 12
5. 2 = 10
6. 2 = 12
$\frac{68}{20} \quad \frac{68}{68}$
$\frac{3.4}{20} \overline{) 68}$

⑩ $3.9 - 3.4 = 0.5$

⑪ $3.9 + 3.7 + 3.4 = 11.0$

$$\begin{array}{r} 3.66 \\ 3 \overline{) 11.0} \end{array}$$

The mean length of the words in the book is about 3.7 letters.

⑫ Inspector 1 sample ~~496~~ 500
Inspector 2 sample 1000

Inspector 2's prediction should be more reliable.

The larger sample should give a more accurate prediction.

⑮ males 42% of 3 = 1.26

females 64% of 2 = 1.28
2.54 of 5

$$\frac{2.54}{5} = 50.8\%$$