

Algebra Text

Section 1.3 Exercises and Applications pg. 16

1. 0 0 0 0 0 1 1 2 2 2 2 3 3 4 4 8

$$\text{mean} = \frac{32}{16} = 2$$

$$\text{median} = \frac{2+2}{2} = 2$$

$$\text{mode} = 0$$

2. Arrange data, smallest to largest

5 5 5 5 8 8 8 10 10 14 14 14 14 25

mode median $\frac{8+10}{2} = 9$ mode

$$\begin{array}{r} \text{mean} = \boxed{10.35} \\ 20 \quad 14 \overline{) 14500} \\ \underline{24} \\ 20 \\ \underline{56} \\ 25 \\ \underline{145} \end{array}$$

$$\begin{array}{r} 14 \overline{) 14500} \\ \underline{-14} \\ 050 \\ \underline{-42} \\ 80 \\ \underline{-70} \\ 10 \end{array}$$

$$\begin{array}{l} \text{mean} = 10.35 \text{ or } 10.4 \\ \text{median} = 9 \\ \text{mode} = 5 \text{ and } 14 \end{array}$$

$$\text{median} = \frac{236 + 244}{2} = 240$$

3. 73 85 111 118 169 173 202 236 244 244 246
302 306 311 345 593

$$\text{mode} = 244$$

$$\text{mean} = 234.87 \text{ or } 234.9$$

$$\begin{array}{r} 73 \\ 85 \\ 111 \\ 118 \\ 169 \\ 173 \\ \hline 729 \end{array} \quad \begin{array}{r} 202 \\ 236 \\ 244 \\ 244 \\ 246 \\ \hline 1172 \end{array} \quad \begin{array}{r} 302 \\ 306 \\ 311 \\ 345 \\ 593 \\ \hline 1857 \end{array} \quad \begin{array}{r} 1857 \\ 1172 \\ \hline 3758 \end{array}$$

3. mean calculation

$$\begin{array}{r} \boxed{234.87} \\ 16 \overline{) 3758.00} \\ \underline{-32} \\ 55 \\ \underline{-48} \\ 78 \\ \underline{-64} \\ 140 \\ \underline{-128} \\ 120 \\ \underline{112} \\ 8 \end{array}$$

pg. 17

4.a. 1 1 1 1 2 2 2 2 2 2 3 3 3 3 3 5 5 5
6 6 7 7 8 8 8 8 8 8 8

mean = 4.18 or 4.2

median = 3

mode = 2 and 8

(each have 1 customer)

$$\begin{array}{r} 37 \\ 41 \\ 56 \\ \hline 134 \end{array} \quad \begin{array}{r} 32 \overline{) 134.00} \\ \underline{128} \\ 60 \\ \underline{- 32} \\ 280 \\ \underline{- 256} \\ 24 \end{array}$$

5. 0 0 2 2 6
median

$$\text{mean} = \frac{x+4}{5} = 2$$