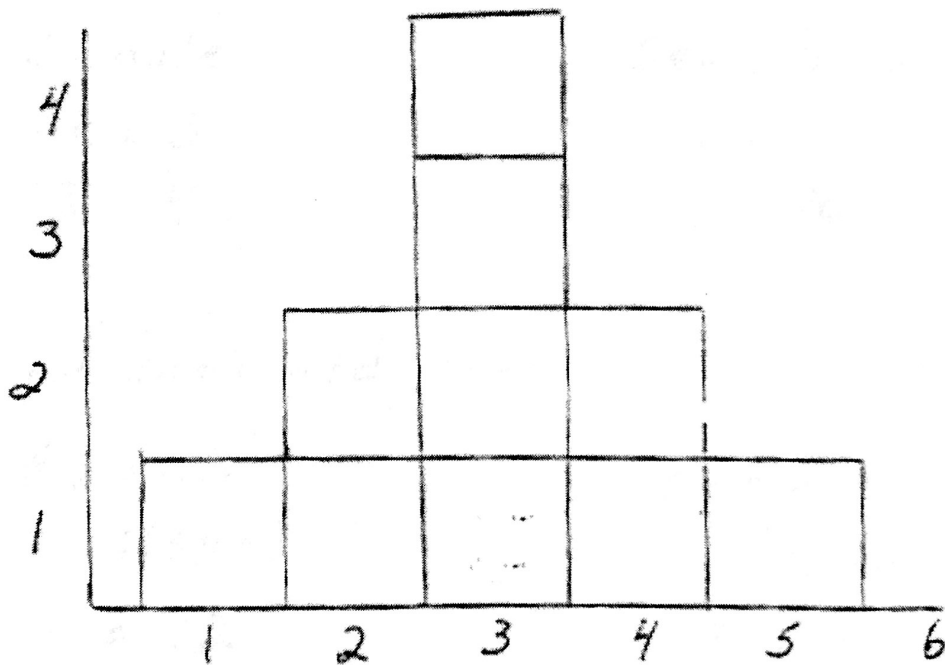


- 4) Median used instead of the mean when there is a skewed distribution, an open-ended distribution, or an ordinal scale

10. a)



b) $\text{mean} = 30/10 = 3$

c) The median is still $x = 3$ (unchanged)

The new mean is $70/10 = 7$

(12)

We know $\mu = \frac{\sum x}{N}$ or $(N)(\mu) = \sum x$

$$\begin{aligned} \therefore \sum x &= (50)(26) \\ &= 1300 \end{aligned}$$

(20)

Sample 1

$$n = 3$$

$$\bar{x} = 4$$

Sample 2

$$n = 7$$

$$\bar{x} = 10$$

Find combined mean

$$\begin{aligned} \sum x &= n(\bar{x}) \\ &= (3)(4) \\ &= 12 \end{aligned}$$

$$\begin{aligned} \sum x &= n(\bar{x}) \\ &= (7)(10) \\ &= 70 \end{aligned}$$

$$\begin{aligned} \therefore \text{combined } \bar{x} &= \frac{\sum x}{n} = \frac{12 + 70}{10} \\ &= \frac{82}{10} \\ &= \boxed{8.2} \end{aligned}$$

(21)

- a) The mode (TV shows form a Nominal Scale,
 b) The mean
 c) The median (distribution positively skewed)

(25)

a) Mean for sample = $\bar{x} = \frac{\sum x}{n} = \frac{115}{16} = 7.1875$
 or 7.19 (rounded off)

Median is 6.5 (Average two middle scores

$$\frac{6 + 7}{2} = 6.5$$

- b) The class is above the norm when using the mean as the definition of average
 c) The class is below the norm when using the median as the definition of average