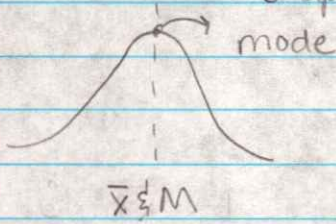


# Shapes of Distribution

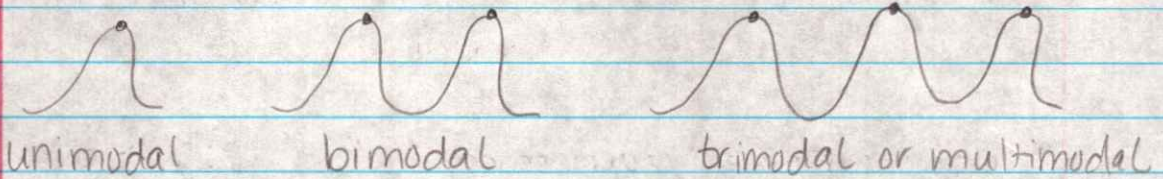
Ex1:



$$\bar{x} = M = \text{mode}$$

Symmetric

Ex2:

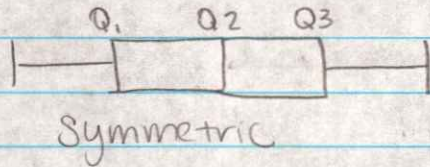


unimodal

bimodal

trimodal or multimodal

Ex3:

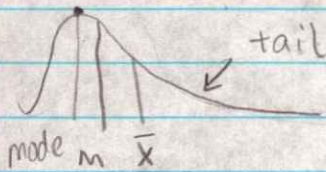


Symmetric

$$Q_3 - Q_2 = Q_2 - Q_1$$

left whisker = right whisker

Ex4:



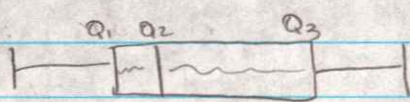
tail

mode M  $\bar{x}$

Skewed right or positive skew

$$\bar{x} > M > \text{mode}$$

Ex5:



Skewed right

(right box is longer)

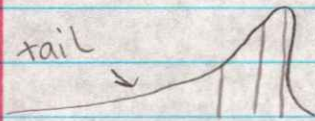
$$Q_3 - Q_2 > Q_2 - Q_1$$

OR



$Q_3 - Q_2 = Q_2 - Q_1$  (right whisker is longer)

Ex6:



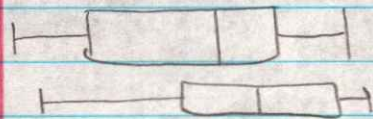
tail

$\bar{x}$  M mode

Skewed left or negative skew

$$\bar{x} < M < \text{mode}$$

Ex7:



$$Q_2 - Q_1 > Q_3 - Q_2$$

left box is longer

$$Q_2 - Q_1 = Q_3 - Q_2$$

left whisker is longer