

§9.2 MEASURES OF VARIATION

3/13/2020

- RANGE

- DEVIATIONS FROM MEAN \bar{x}

- VARIANCE, STANDARD DEVIATION s

- COUNTING $\bar{x} \pm ks$

→ VALUES WITHIN k STANDARD DEV. OF MEAN

→ % OF

→ CHEBYCHEV'S THM

(Faint handwritten notes and diagrams, including a normal distribution curve and various mathematical expressions, are visible in the background.)

DEVIATIONS FROM THE MEAN

GIVEN DATA: 8, 12, 15, 20, 21, 14

$$\begin{aligned}\text{MEAN } \bar{X} &= \frac{\sum x_i}{n} = \frac{8+12+\dots+14}{6} \\ &= \frac{90}{6} = \underline{\underline{15}}\end{aligned}$$

<u>X</u>	<u>X - \bar{X}</u>
8	-7
12	-3
15	0
20	5
21	6
14	-1
	+
	<u>0</u>

Def: GIVEN A VALUE X
FROM A DATA SET WITH
MEAN \bar{X} , THE
CORRESPONDING DEVIATION
FROM THE MEAN IS
 $X - \bar{X}$.

