Name: Key

12.4 & 12.7 Review

Given the data sets, identify them as symmetrical, positive or negative. Then, use either the mean and standard deviation or the five-number summary.

1)

Data A						
1	3	5	5	5	7	10

Symmetrical

$\bar{x}$: 5.14

$\sigma(s)$: 2.85

2)

Data B						
2	7	7	8	12	14	20

Positive

Med: 8

Range: 18

50% of the data lies between 7 and 14.

3)

Data C						
3	6	7	9	10	10	11

Negative:

Med: 9

Range: 8

50% of the data lies between 6 and 10.

The data given is a 6-year span of OEHS composite (Reading & Mathematics) score of students who meet and exceed state standards.

Year	2010	2011	2012	2013	2014	2015
%	52	54	55	60	58	58

4) What are the mean, median, mode, range & standard deviation of students who meet or exceed?

$\bar{x}$: 56.17 $\sigma(s)$: 2.99

med: 56.5 Range: 8

mode: 58

5) Multiply the students who meet and exceed by 1.05. Find the mean, median, mode, range & standard deviation.

$\bar{x}$: 58.98 $\sigma(s)$: 3.14

med: 59.33 Range: 8.4

mode: 60.9

6) Add 1.25% to students who meet and exceed. Find the mean, median, mode, range & standard deviation.

$\bar{x}$: 57.42 $\sigma(s)$: 2.99

med: 57.75 Range : 8

mode: 59.25

7) A bag contains 12 marbles. Three are green, two are blue, 6 are yellow and 1 is red. Diana chooses one marble, records the color, and places it back into the bag. She then chooses another marble. Find the probability that Diana chooses a green marble each time. 3G, 2B, 6Y, 1R

1st Pick $\frac{3}{12}$ 2nd Pick $\frac{3}{12}$ $= \frac{1}{16}$

8) Three cards are drawn randomly from a standard deck of cards and not replaced. Find each probability if the cards are drawn in the order indicated.

a. P(four, king, queen) $\frac{4}{52} \cdot \frac{4}{51} \cdot \frac{4}{50} = .00048$ or $\frac{8}{16,575}$

b. P(spade, club, not heart) $\frac{13}{52} \cdot \frac{13}{51} \cdot \frac{39}{50}$ (already took 4 ♣) $.005$ or $\frac{481}{10,200}$

9) Brad has 25 CDs. Eight are rock, eight are jazz, two are rap and seven are classical. He chooses one CD at random. Find each probability. 8Ro, 8J, 2Ra, 7C

a. P(jazz or rap) ME

$\frac{8}{25} + \frac{2}{25} = \frac{10}{25}$ $\frac{2}{5}$

b. P(rock or classical) ME

$\frac{8}{25} + \frac{7}{25} = \frac{15}{25}$ $\frac{3}{5}$

10) There are 26 students in Mr. Collins' English class. Twelve are seniors and fourteen are juniors. Eight of the seniors are boys and six of the juniors are boys. What is the probability that a randomly selected student is a boy or a senior? NME

12 seniors | 8 B, 4G

14 juniors | 6 B, 8G

$\left[\frac{14}{26} + \frac{12}{26}\right] - \left(\frac{8}{26}\right)$

Boy Sr Sr+Boy

$\frac{18}{26} = \frac{9}{13}$

11) What is the probability of randomly selecting a state that begins or ends with an 'A?' NME

# of states that begin w/ 'A' : 4 [Alaska, Arizona, Alabama, Arkansas]

# of states that end w/ 'A' : 21

$\frac{4}{50} + \frac{21}{50} - \frac{3}{50} = \frac{22}{50} = \frac{11}{25}$