Statistics 2.1 (KEY)
Algebra 2

For Problems 1-2, find the mean, median and mode for the number of wins for each team.

1)

Phoenix Suns Basketball	
Season	# of total wins
2006-2007	61
2005-2006	54
2004-2005	62
2003-2004	29
2002-2003	44
2001-2002	36
2000-2001	51
1999-2000	53
1998-1999	27
1997-1998	56

Mean:

47.3

Median:

52

Mode:

none

2)

Utah Jazz Basketball	
Season	# of total wins
2006-2007	51
2005-2006	41
2004-2005	26
2003-2004	42
2002-2003	47
2001-2002	44
2000-2001	53
1999-2000	55
1998-1999	37
1997-1998	62

For problems3-4, find the range, quartiles, inter-quartile range, variance, and standard deviation for the sets of data:

3) Tom's quiz scores for third term are as follows:
22, 25, 18, 19, 24, 18, 15

In order (lowest - highest): 15, 18, 18, 19, 22, 24, 25

Range (max-min): 25 - 15 = 10 = range

Quartiles- Q1= 18
Q3 = 24

Inner-Quartile-Range (Q3-Q1): 24 - 18 = IQR = 6

Mean: $\bar{X} = 20.1429$

Variance:

$$\frac{(15-20.1429)^2+(18-20.1429)^2+(18-20.1429)^2+(19-20.1429)^2+(22-20.1429)^2+(24-20.1429)^2+(25-20.1429)^2}{7}$$

σ^2 (The variance) = $\frac{78.8571}{7} = 11.3$

σ = Standard Deviation: $\sqrt{variance} = \sqrt{11.2653} = 3.4$

4) The linebackers and safeties on a football team each recorded unassisted tackles during a season as follows:
34, 89, 52, 62, 48, 95, 57

For Problems 5-6, use your calculator to find the mean and standard deviation for each data set.

5)

Average Phoenix Temperatures		
Month	High (F°)	Low (F°)
January	65	39
February	70	42
March	75	47
April	83	53
May	92	62
June	102	71
July	105	80
August	102	78
September	98	71
October	88	59
November	74	47
December	66	40

$\bar{X}(highs) = 85^{o}$

$\sigma_{X}(highs) = 14.2^{o}$

$\bar{X}(lows) = 57.4^{o}$

$\sigma_{X}(lows) = 14.3^{o}$

6)

Cost of 1-ct white gold diamond ring	
Company	Price ($)
Zales	6,499
Jared	7,299
Kay	6,499
John Atencio	7,699
Costco	8,199
Shane	6,475
Tiffany's	9,599
Macy's	3,999
Adiamor	5,999
Ben Bridge	8,195
Helzberg	6,999
Bvlgari	5,700

Calculate each probability as a fraction, a decimal and a percentage.

7) Darren is shooting a free throw. He has made 27 out of 43 free throws this season. What is the probability he will make this free throw?

$$\frac{27}{43} = .63 = 63\%$$

The fish population in a mountain lake is distributed as follows: Rainbow trout - 31%, Cutthroat trout - 29 %, Largemouth Bass - 19%, Walleye - 14%, Perch - 7%.

8) What is the probability of catching a trout on a given cast?

$$\frac{60}{100} = \frac{3}{5} = .6 = 60\%$$

9) What is the probability of catching any fish but Bass?

$$\frac{81}{100} = .81 = 81\%$$