

## **AP Statistics**

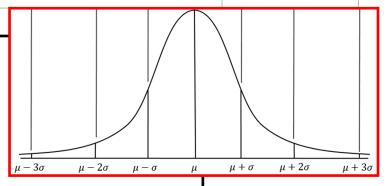
## **Unit 2: Normal Distribution**

## Chapter 6

m'k	KEEP YOUR EYE ON THAT GUY, TOM. HE		5	6	7	
					6.1	
					Candy Bar Lab	
					HW: 5 BIG ideas from Chapt 6	
	10	11	12	13	14	
	6.2	6.3	6	5.4	6.5	
	Empirical Rule	z-scores & percentiles	Practice	& Review	Unit 2 Test	
	HW: p131 (25,26,29,30)	HW: <b>p132(17,37,39,41</b> ; <b>38,40,42)</b>	HW: Gather y	our homework		

## Topics—Unit 2

- 1. Exploring Data: Describing patterns and departures from patterns
  - B. Summarizing distributions of univariate data
    - 1. Measuring center: median, mean
    - 2. Measuring spread: range, interquartile range, standard deviation
    - 3. Measuring position: quartiles, percentiles, standardized scores (z-scores)
    - 4. Using boxplots
    - 5. The effect of changing units on summary measures
- 3. Anticipating Patterns: Exploring random phenomena using probability and simulation
  - C. The normal distribution
    - 1. Properties of the normal distribution
    - 2. Using tables of the normal distribution
    - 3. The normal distribution as a model for measurements



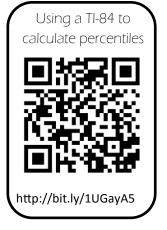
$$z = \frac{x - \mu}{\sigma}$$

 $\mu=$  Mean

 $\sigma=$  Standard Deviation

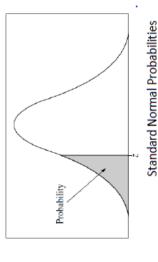


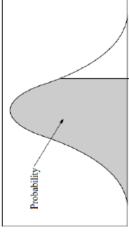






lying below z. Table entry for z is the probability





e entry is the ability below z		Probability							
e A			Star	ndard N	ءُ Standard Normal Probabilities	robabilit	ies		
00'	.01	.02	.03	.04	.05	90'	70'	80.	60.
.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	6289.
.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
.7257	.7291	.7324	7357	.7389	.7422	.7454	.7486	.7517	.7549
.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
.7881	.7910	.7939	7967	.7995	.8023	.8051	8078	.8106	.8133
.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	,8621
.8643	.8665	9898	80/8	.8729	.8749	.8770	.8790	.8810	.8830
.8849	6988.	.8888	8907	.8925	.8944	.8962	.8980	7668.	.9015
.9032	.9049	9906	.9082	6606.	.9115	.9131	.9147	.9162	.9177
.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	9306	.9319
.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
.9554	.9564	.9573	.9582	.9591	.9599	9096.	9616	.9625	.9633
.9641	.9649	9656	.9664	.9671	8296.	9896:	.9693	6696	9026.
.9713	9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	7976.
.9772	.9778	.9783	.9788	.9793	9246.	.9803	9808	.9812	.9817
.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
.9861	.9864	.9868	.9871	.9875	9878	.9881	.9884	.9887	9890
.9893	9886	8686.	.9901	.9904	9066	6066	.9911	.9913	.9916
.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	9866
.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
.9953	.9955	9366	.9957	9959	0966	.9961	.9962	.9963	9964
9962	9966	2966	8966	6966	0266.	.9971	.9972	.9973	.9974

1.0

.0110 .0143 .0183 .0233 .0294

0116 .0120

0119

.0122

0129 0166

0136

0174

0222 0281

0094

9600 .0125

6600

.0154

.0158

0162 .0207 0262

6.0

.0048

.0064 .0084

8900

0087 0113 0146 0188

6800

1.5 1.6

0239

.0244

.0220

.0256

0268

.0274

0212

.0192

.0197

.0202

.0301

.0307 .0384

.0314 .0392 .0548 .0594 .0721

.0322 .0401

.0329 0409 0505 .0618 0749

.0336

.0344

.0351

.0418

.0427

0436 .0537

1.8

.0455 .0559

.0465

.0475 .0582 .0708 1020

.0526 9090

.0571 .0694 .0838

.0367

.0375

2.0

.0823 .0985 .1170 .1379

6980 1038

.0735 .0885

.0630

.0655

.0668

.0793 .0951 1131

.0808

.0968

.1151 .1357.1587

.0764

.0548

.0526 .0643 .0778 .0934 .1112 .1343 .1539 .1788 .2061

.0548

1056

1075

.0901

.0918 1093

1003

1190 1401 1635 1894

.1210

1230

1251

1271 1492 1736

1292

1335

1562 1814

- 1.0 -0.9 - 0.8

-1:1

.1423

.1446 1685

1469

1515

1762

1711

.1611 .1867 .2148 .2451

.0681

1.9

0.4

.0010

.0010

.0011

.0011 .0015 .0021 00029 .0039 .0052 6900 0091

.0012 .0017 .0023 0032

.0013

.0018

.0018 0025

.0019 .0026 .0035 .0047 .0062 .0082 .0107 0139.0179 .0228 .0287 .0359 .0446

6000 .0004

.0010

-3.1

.0013

-3.0

.0014

.0014 0000 00027 0037 0049

.0015 .0021

.0016

.0022

.0023

.0007

.0007

.000 .0004 .0005

> .0003 .0004 9000 .0008

.0003

.0003

.00 .0003 .0004

.0003

.0003 .0005

.0003 0000 0000 6000 0013

.0003

- 3.4 - 3.3 -3.2

8 Table A

.0005 .0007

.03

.0004

.0004 9000 .0008

9000 .0004

> 9000 .0008 .0012 00016

9000 6000

.0008 .0011 .0019 .0026 .0036

.0028

.0030

0031

.0033

0034

.0024

0040

0041 0055 0073

.0043

.0044

0045 0900

0057

.0059 .0078 0102 .0132 .0170 .0217

> 0000 0104

.0038

.0051

.9981 9866 9990 9993 9995 7666

9979 9985 6866 .9992 .9995 9666 9997

9990 9866

6866

6866 9992 9994

9988 9992

9987

7866. 9990 .9993

.3121

.2776

2843 3192

2877 3228 3594

2946

2981

3300

3336

3409

3632

3669 4052 4404

4443

4483

4562

-0.1

.4207 .4602

.3821

-03 -0.2

2483 2810 3156

2514

2546

2611

2643

2327

.2358 .2676 3015 3372 3745 4129 4522 .4920

2389 2709 3050

.2420 .2743 3085 .3446

- 0.7

7117.

2206

2236

2266 2578 2912

1922

1949

1977

2005 2296

2033

2090

2119

.1841

.1660

.9981

9985

9984

9984

9983 9988 .9991

9982

9975 9982 9987

.9974

.9992 .9994

9666

9666

9994 9666

9994 9666

9994 9991

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