

## PRACTICE EXERCISES

Table A below shows the distribution of undergraduate students at Normal University according to the number of credit hours for which they are registered this semester.

Table B below shows the distribution of students at Normal University according to cumulative G.P.A.

TABLE A

# of credit hours	% of students
11 or fewer	12%
12	31%
13	6%
14	8%
15	21%
16	9%
17	2%
18 or more	11%

TABLE B

cumulative G.P.A.	% of students
0.00 - 0.80	14%
0.81 - 1.60	16%
1.61 - 2.40	38%
2.41 - 3.20	17%
3.21 - 4.00	15%

**1 - 4:** Refer to the appropriate table to determine the probability that a randomly selected student:

- has a G.P.A. greater than 0.80.  
A. .16      B. .86      C. .81      D. .14
- is registered for 12 or 13 credit hours.  
A. .516      B. .186      C. .37      D. .91
- is registered for more than 16 credit hours.  
A. .13      B. .22      C. .31      D. .09
- has a G.P.A. that is not in the 0.81 - 3.20 range.  
A. .14      B. .15      C. .71      D. .29

**5 - 6:** Statistics for a certain carnival game reveal that the contestants win a large teddy bear 1% of the time, win a small teddy bear 4% of the time, win a feather attached to an alligator clip 35% of the time, and lose the rest of the time. What is the probability that a randomly selected player...

- ...wins a teddy bear.  
A. .4      B. .05      C. .5      D. .005
- ...doesn't lose.  
A. .65      B. .35      C. .4      D. .04

- A survey of 50 informed voters revealed the following:  
32 believe that Earth has been visited by space aliens  
28 believe that Elvis is still alive

20 believe that Earth has been visited by space aliens and Elvis is still alive. According to this data, what is the probability that a randomly selected informed voter believes that Earth has been visited by space aliens or Elvis is still alive?

- A. .40      B. .60      C. .80      D. 1.20

8. Referring to the data in #7 above, what is the probability that a randomly selected voter doesn't believe that Earth has been visited by space aliens and doesn't believe that Elvis is still alive?

- A. .20      B. .1584      C. .40      D. .80

9. A group of Harley-Davidson enthusiasts were recently asked "How many tattoos do you have?" The responses are summarized in the following table:

# of tattoos	% of respondents
0	2%
1	4%
2	3%
3	5%
4 or more	86%

What is the probability that a randomly chosen respondent has at least one tattoo?

- A. .02      B. .04      C. .80      D. .98

10. Referring to the data in the table for #9, what is the probability that a respondent has 2 or 3 tattoos?

- A. .8      B. .08      C. .15      D. .0015

**11 :** The table below shows the distribution according to salary of the employees of a large corporation.

annual salary	% of employees
\$0 - 9,999	4%
10,000 - 29,999	38%
30,000 - 59,999	32%
60,000 - 99,999	17%
100,000 or more	9%

**11.** Find the probability that a randomly chosen employee's salary is in the \$0,000 - \$9,999 range or in the \$60,000 - \$99,999 range.

- A. .2032      B. .0068      C. .57      D. .21

**12.** The table below summarizes the distribution of a number a dogs. If one of these dogs is randomly selected, find the probability that it doesn't have fleas or is a bulldog.

	beagle	poodle	bulldog	totals
fleas	21	17	9	47
no fleas	9	13	5	27
totals	30	30	14	74

- A. 0.49      B. 0.36      C. 0.41      D. 0.55

**13.** A survey of bulldogs reveals that 28% of them agree with the statement "cats are yummy." Among a group of 900 bulldogs how many would we expect to agree with the statement "cats are yummy?"

- A. 572      B. 25      C. 648      D. 252

**14.** At the Wee Folks Gathering there are 45 jolly hobbits, 27 grumpy hobbits, 5 jolly leprechauns and 27 grumpy leprechauns.

If one person is randomly selected, find the probability that he/she is a leprechaun or jolly.

- A. .77      B. .74      C. .048      D. .05

**15.** A survey of 50 informed voters revealed the following:

32 believe that Earth has been visited by space aliens

28 believe that Elvis is still alive

20 believe that Earth has been visited by space aliens and Elvis is still alive.

According to this data, what is the probability that a randomly chosen voter doesn't believe that Elvis is still alive, given that he/she believes that Earth has been visited by space aliens?

- A. .375      B. .6      C. .24      D. .25

16. A group of Harley-Davidson enthusiasts were recently asked “How many tattoos do you have?” The responses are summarized in the following table:

# of tattoos	% of respondents
0	2%
1	4%
2	3%
3	5%
4 or more	86%

What is the probability that a randomly chosen Harley-Davidson enthusiast has more than one tattoo, given that he/she has fewer than 4 tattoos?

- A. .08      B. .04      C. .57      D. .29

17. The table below shows the distribution according to salary of the employees of a large corporation.

annual salary	% of employees
\$0 - 9,999	4%
10,000 - 29,999	38%
30,000 - 59,999	32%
60,000 - 99,999	17%
100,000 or more	9%

Find the probability that a randomly chosen employee’s salary is more than \$9,999, given that it is less than \$60,000.

- A. 1.297      B. .946      C. .543      D. .70

18. In a basket, there are 10 ripe peaches, 8 unripe peaches, 12 ripe apples, and 4 unripe apples. If one fruit is randomly chosen, find the probability that it is a peach, given that it is unripe.

- A. .50      B. .44      C. .67      D. .33

**ANSWERS TO PRACTICE EXERCISES**

1. B      2. C      3. A      4. D      5. B      6. C  
 7. C      8. A      9. D      10. B      11. D      12. A  
 13. D      14. B      15. A      16. C      17. B      18. C