

CH 13 Review Geometry B

Name:

Hr:

1. In your closet you have 5 favorite t-shirts, and 4 shorts that you love to wear during the summer time. You also have a black and blue pair of sandals that you switch back and forth between. Use the fundamental counting principal to see how many different combinations of outfits you have to choose from.

$$5 \cdot 4 \cdot 2 = 40$$

2. How many different ways can 9 P.E students line up in a straight line?

$$9! = 362,880$$

Evaluate the following numbers.

3. $4! = 24$

4. ${}_{10}P_5 = 30240$

5. ${}_7C_3 = 35$

6. How many different ways can 32 students score 1st, 2nd, or 3rd place in the spelling bee?

$${}_{32}P_3 = 29,760$$

7. There are 10 students who need to be tutored this summer, but there are only 7 spots open. How many different combinations can these 7 students be selected to be tutored?

$${}_{10}C_7 = 120$$

Find the probability of #8 - #10. Round to the nearest hundredth and leave your answer as a percentage.

8. 35 out of the 55 Algebra II students in Mrs. Gervais' class scored an A or a B on the CH 9 Test. What is the experimental probability that a student will score an A or B on the CH 11 test?

$$\frac{35}{55} = .636 \quad (.64) \rightarrow \boxed{64\%}$$

9. Tell the theoretical probability of rolling 4 on a standard dice?

$$\frac{1}{6} = .16\bar{6} \quad (.17) \rightarrow \boxed{17\%}$$

10. Find the experimental probability that you are dealt exactly two jacks in a 5-card hand using a standard deck of cards.

$$\frac{\text{Jack's} \cdot \text{Non-Jacks}}{\text{TOTAL}} = \frac{4^C \textcircled{2} \cdot 48^C \textcircled{3}}{52^C \textcircled{5}} = \frac{103776}{2598960} = .039 = \boxed{4\%}$$

A card is randomly drawn from a standard deck of 52 cards. Find the probability for drawing the following.

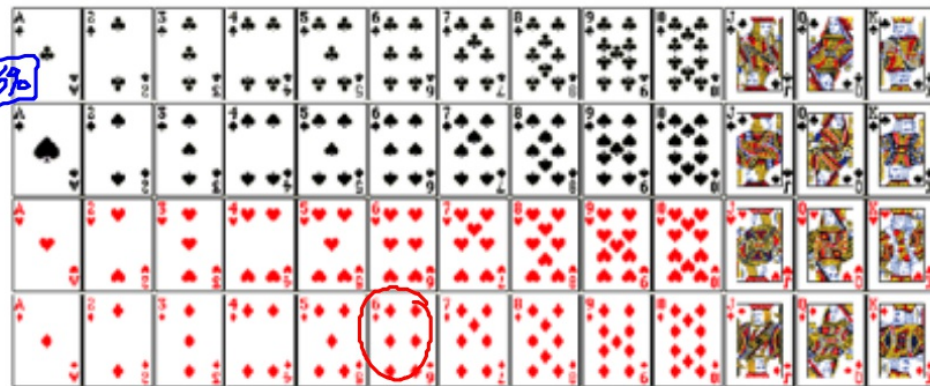
11. P(Ace ~~and~~ a 5) = $P(A) + P(5)$
 $\frac{4}{52} + \frac{4}{52} = \frac{8}{52} = .15 = 15\%$

12. P(8 ~~or~~ Queen) = 0%

13. P(Diamond or a 6)

$\frac{13}{52} + \frac{4}{52} - \frac{1}{52} = \frac{16}{52} = .307$
 31%

$P(D) + P(6) - P(D \cap 6)$



Use the table to find each probability. The table gives information about the number of pets in a persons home.

14. P (1 pet / female) $\frac{13}{31} = .419$
42%

	0 Pets	1 Pet	2 Pets	3 + Pets
Male respondents	5	10	5	2
Female respondents	10	13	6	2

= 22 TOTAL

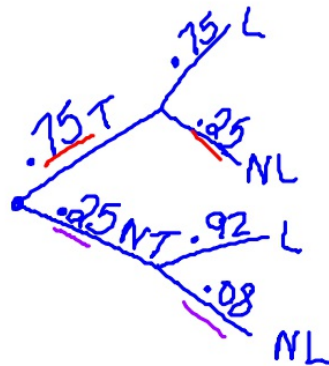
15. P (2 pets / male) $\frac{5}{22} = .227$
23%

= 31 TOTAL

4
TOTAL

16. P (female / 3 + pets)
 $\frac{2}{4} = \frac{1}{2} = .5$
50%

75% of the population that attends the coast guard festival are tourist. 25% of that population does not like the festival. 92% of the population that are not tourist enjoy the festival. Create a tree diagram below to help answer the questions below.



17. Find the probability that a person is a tourist who does not like the festival.

$$P(T) \cdot P(NL) \\ (.75) \cdot (.25) = .1875 = \boxed{19\%}$$

18. Find the probability that a person is not a tourist and does not like the festival.

$$P(NT) \cdot P(NL) \\ (.25) \cdot (.08) = .02 = \boxed{2\%}$$

Use the random number table to answer the following questions. Start in the top left for both #19 & #20.

START →

67120	69656	32894	25564	95187	59758	06641
61362	63496	65882	61214	47113	54036	04317

19. A popular restaurant is not taking reservations for New Year's Eve, and instead is planning to hand out numbers between 20 – 60 to people that show up from 6:00 – 8:00 pm. If the restaurant can seat 6 tables to get the night started, which people would eat first?

56, 32, 39, 42, 55, 58

20. A teacher assigns every kid in the class a number between 1 and 9 to divide them up into groups. If she is to select 3 groups randomly to present their findings, which group would get to present first?

6, 7, 1