Algebra 2-H HW#_____ Name_____

12.4 & review

Per_____Col____

Find P(A or B). Are A and B mutually exclusive events?

1. P(A) = $\frac{4}{11}$, P(B) = $\frac{6}{11}$, P(A and B) = $\frac{2}{11}$.

2. P(A) = 28%, P(B) = 14%, P(A and B) = 0%

Find P(A').

3. P(A) = 0.7

4. P(A) = 63%

Solve each problem. Give the answers in simplest fractional form unless otherwise requested.

5. Of the 148 students honored at an academic banquet, 40 won awards for mathematics, 82 won for literature, and 12 won for both mathematics and literature. One of the 148 students is chosen at random. What is the probability that this student won an award for mathematics or literature?

6. The probability that you will make the track team is $\frac{2}{3}$. The probability that you will make the swim team is $\frac{3}{4}$. The probability that you will make both teams is $\frac{1}{2}$.

a) What is the probability that you will make the swim team or track team?

b) What is the probability that you will make neither team?

7. The probability that it will rain Monday is 10% and the probability that it will rain Tuesday is 20%. The probability that it will rain both days is 10%. What is the probability that it will rain Monday or Tuesday? Give the answer as a %.

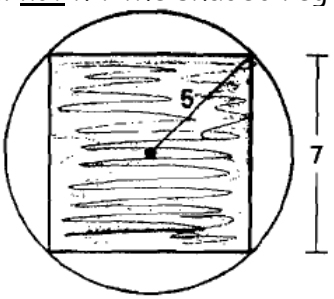
8. Four high school friends will all be attending the same university next year. There are 14 dormitories on campus. Find the probability that at least 2 of the friends will be in the same dorm. Round answer to the nearest hundredth. (Hint: use the complement)

9. Test grades on an Algebra 2 Honors test were 9 As, 18 Bs, and 8 Cs.
a) A student in the class is chosen at random. What is the probability the student did not earn a C on the test?

b) The teacher randomly chooses 3 test papers. What is the probability that the teacher chooses and removes tests with grades of A, B, and C, in that order?

10. Of all babies born in the U.S. in 1996, 12.9% were born to teenage mothers, 51.8% were born to mothers in their twenties, 33.4% were born to mothers in their thirties, and the rest were born to mothers in their forties. What is the probability, as a %, that the birth mother was in her thirties or forties?

11. Find the probability that a dart thrown at the target below will <u>not</u> hit the shaded region. Round the answer to the nearest hundredth.



12. Ten men and 15 women apply for a job. All are equally qualified and 4 applicants are hired at random. Find the probability of hiring:
a) 2 men and 2 women
b) at least 3 women

13. If the letters in the word INDIANA are rearranged, find the probability that they spell "INDIANA".

14. Six by authors with different last names are arranged on a shelf. Find the probability that when the books are arranged by the authors' last names, the books are in alphabetical or reverse alphabetical order.