

**I. Use the map to find the probabilities below. Express answers as a fraction and as a percent.**

- 1.) P (next to the Pacific Ocean) = \_\_\_\_\_
- 2.) P (borders Mexico) = \_\_\_\_\_
- 3.) P (has at least five neighboring states) = \_\_\_\_\_
- 4.) P (is surrounded by water) = \_\_\_\_\_
- 5.) P (next to the Atlantic Ocean) = \_\_\_\_\_
- 6.) P (borders Canada) = \_\_\_\_\_
- 7.) P (next to the Mississippi River) = \_\_\_\_\_
- 8.) P (has Mountain Standard Time) = \_\_\_\_\_
- 9.) P (next to the Gulf of Mexico) = \_\_\_\_\_
- 10.) P (has Eastern Standard Time) = \_\_\_\_\_

**II. Nicholas is posting 2 photographs on his website. He has narrowed his choices to 4 landscape photographs and 3 portraits.**

If he chooses the two photographs at random, find the probability of each selection. Express your answers as a percent

11.) P (2 Portrait)

12.) P (2 Landscape)

13.) P (1 of each)

**III. The Robinsons have a collection of 28 video movies, including 12 westerns and 16 science fiction. Elise selects 3 of the movies at random to bring to a sleep-over at her friend's house. Find the probability of each selection.**

Express your answer as a percent.

14.) P (3 Western)

16.) P (2 Western and 1 Science Fiction)

18.) P (1 Western and 2 Science Fiction)

15.) P (3 Science Fiction)

17.) P (3 Comedy)

19.) P (2 Science Fiction and 2 Western)

**IV. A bag contains 1 green, 4 red, and 5 yellow balls. Two balls are selected at random. Find the probability of each selection.**

Express your answer as a percent.

20.) P (2 red)

21.) P (1 red and 1 yellow)

22.) P (1 green and 1 yellow)

23.) P (2 green)

24.) P (2 yellow and 1 red)

**V. Use the table that shows the range of verbal SAT scores for freshmen at a small liberal arts college. If a freshmen student is chosen at random, find each probability. Express answer as a percent.**

Score Range	400–449	450–499	500–549	550–599	600–649	650+
Number of Students	129	275	438	602	620	412

25.) P (600 – 649)

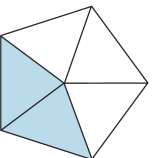
26.) P (400 – 499)

27.) P (450 – 559)

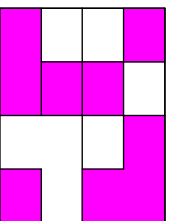
28.) P (at least 650)

**VI. Find the geometric probability of each figure below. Express answer as a percent. Must show work!**

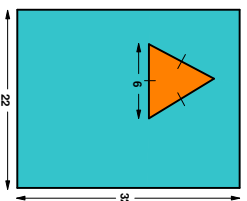
29.) A dart hits the board below. Find the probability that the dart landed in the shaded region.



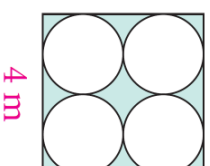
30.) A coin is tossed on the mat below. Find the probability that the coin landed in the shaded region.



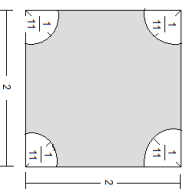
31.) A sky diver is trying to hit a triangular target on a rectangular landing pad. What is the probability that he will hit his target?



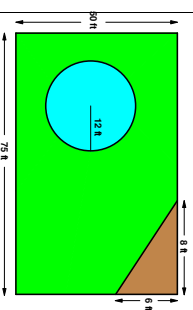
32.) A dart hits the dart board below. Find the probability that the dart landed in the shaded region?



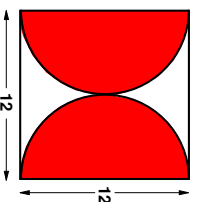
33.) What is the probability of a sky diver landing in the shaded region?



34.) The rectangular yard shown has a circular pool and a triangular garden. A ball from the adjacent golf course lands at a random point within the yard. Find the probability that the golf ball landed on the grass.



35.) A dart is thrown at the board below. Find the probability that the dart hit the shaded region.



36.) Arrow is being thrown at the target below. The 10-point circle has a 4.8 inch diameter and each of the other rings is 2.4 inches wide. What is the probability of the arrow hitting the blue area?

