

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) = 10%
- 2.) P (borders Mexico) = 8%
- 3.) P (has at least five neighboring states) = 42%
- 4.) P (is surrounded by water) = 2%
- 5.) P (next to the Atlantic Ocean) = 28%
- 6.) P (borders Canada) = 22%
- 7.) P (next to the Mississippi River) = 20%
- 8.) P (has Mountain Standard Time) = 24%
- 9.) P (next to the Gulf of Mexico) = 10%
- 10.) P (has Eastern Standard Time) = 42%

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) 14.3%
- 12.) P (2 Landscape) 28.6%
- 13.) P (1 of each) 57.1%

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) 6.7%
- 15.) P (3 Science Fiction) 17.1%
- 16.) P (2 Western and 1 Science Fiction) 32.2%
- 17.) P (3 Comedy) 0%
- 18.) P (1 Western and 2 Science Fiction) 44%
- 19.) P (2 Science Fiction and 2 Western) 0%

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) 13.3%
- 21.) P (1 red and 1 yellow) 44.4%
- 22.) P (1 green and 1 yellow) 11.1%
- 23.) P (2 green) 0%
- 24.) P (2 yellow and 1 red) 0%

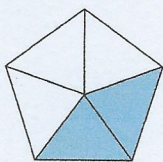
V. Use the table that shows the range of verbal SAT scores for freshmen at a small liberal arts college. If a freshmen student is chosen at random, find each probability. Express answer as a percent.

Score Range	400–449	450–499	500–549	550–559	600–649	650+
Number of Students	129	275	438	602	620	412

- 25.) P (600 – 649) 25.04%
- 26.) P (400 – 499) 16.3%
- 27.) P (450 – 559) 53.1%
- 28.) P (at least 650) 16.7%

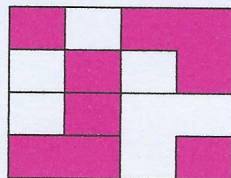
VI. Find the geometric probability of each figure below. Express answer as a percent. Must show work!

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



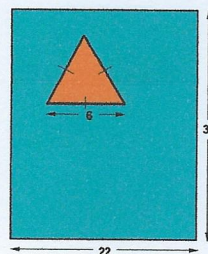
40%

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



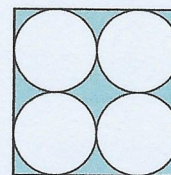
56.3%

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?



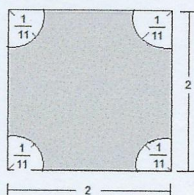
2.2%

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



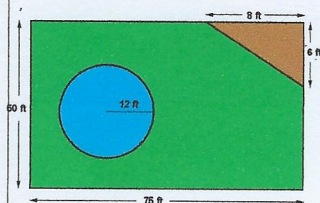
21.3%

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



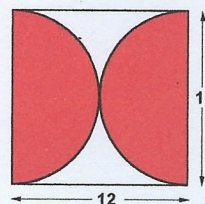
99.4%

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.



87.3%

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



78.5%

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?



20%