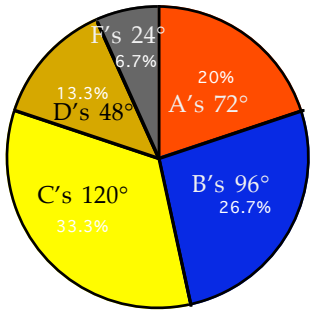
To find the correct percentages for each grade, add up the total number of grades and divide each individual amount by the total. An example graph is given below.



 55

The correct choice is Answer b. First, you must find the total number of golf balls, which is 800 boxes x 12 balls =9600 golf balls. Of these 50 have been painted to indicate a prize. If you buy any one ball from the 9600, your chance of winning would be 50/9600 which reduces to 1/192. If you buy 4 balls your probability of picking a painted ball is multiplied by four. Your new probability becomes 4 x 1/192 = 4/192, which reduces to 1/48.

 56

The correct answer is d. To figure out the probability, put the area of the shaded region over the area of the whole circle. The area of the shaded region is $81\pi-36\pi$. Factor out the π, which gives $\pi(81-36)$ and this is equal to 45π. The area of the whole circle is 81π. The probability is then 45π / 81π. After cancelling 9 π, the fraction reduces to 5/9.

 57

If 30 of the 100 seniors who received an academic scholarship also received an athletic scholarship, this means the other 70 received only an academic scholarship. The same applies to athletic scholarships. Therefore a total of 170 seniors received scholarships: 70 academic, 70 athletic and 30 both. If there are 500 seniors, then 330 did not receive scholarships. An example of a model showing the division of scholarships is shown below.

 58

The correct answer is b. 10. The next number is found by adding increasingly larger whole numbers to the previous number. 0+1, 1+2, 3+3, 6+4...
0, 1, 3, 6....

a. 9
b. 10
c. 11
d. 12

 59

The rule for the pattern below is b: 2^n

$2^0, 2^1, 2^2, 2^3$ ....

a. $2n + 2$
b. 2^n
c. $2n$
d. $2^{(n-1)}$

 60