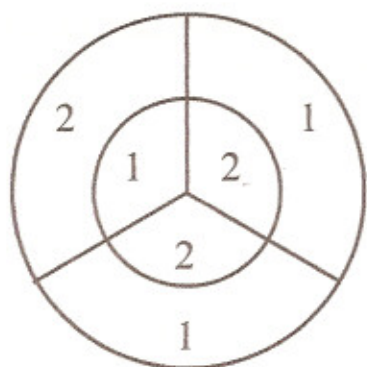


25. On the dart board shown in the figure, the outer circle has radius 6 and the inner circle has radius 3. Three radii divide each circle into three congruent regions, with point values shown. The probability that a dart will hit a given region is proportional to the area of the region. When two darts hit this board, the score is the sum of the point values in the regions. What is the probability that the score is odd?



$$\text{even} \quad \frac{1}{12} + \frac{1}{12} + \frac{1}{4} = \boxed{\frac{5}{12}}$$

$$\text{odd} \quad 1 - \frac{5}{12} = \boxed{\frac{7}{12}}$$

(A)  $\frac{17}{36}$

(B)  $\frac{35}{72}$

(C)  $\frac{1}{2}$

(D)  $\frac{37}{72}$

(E)  $\frac{19}{36}$

Solution: Probability to land on even:

Two years ago: Case one ① odd  $\times$  even

$$\frac{7}{12} \times \frac{5}{12} = \frac{35}{144}$$

Case two ② even  $\times$  odd

$$\frac{5}{12} \times \frac{7}{12} = \frac{35}{144}$$

$$+ = \boxed{\frac{35}{72}}$$

Now I feel the answer is  $\boxed{\frac{35}{144}}$  which is not on the answer choice. If they stated that the darts are distinguishable, I can understand the answer being (B). But you can not tell the difference between the two darts, what if I decide to throw them at once? Am I missing fundamental understanding? I think the problem is flawed.