

Geometry Honors Worksheet
9.2.3 Geometric Probability

Round all probabilities to the nearest tenth of a percent.



1. A rectangular field measures 27 feet by 15 feet. Find the area of the field.
2. A small shed is on the field. Its dimensions are 8 feet by 10 feet. What is its area?
3. What is the probability that a single drop of rain that lands in the field would hit the shed?
4. What is the probability that a single drop of rain that lands in the field would *not* hit the shed?
5. There is a large oak tree in one corner whose branches have a diameter of 20 feet. What is the probability that a single drop of rain that lands in the field would miss both the shed and the tree? (Assume the shed is not under the tree.)

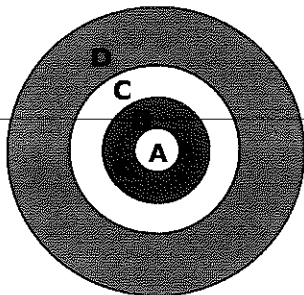
A dartboard is made up of concentric circles with the following radii:

Circle A: $r = 2$ inches

Circle B: $r = 4$ inches

Circle C: $r = 6$ inches

Circle D: $r = 10$ inches

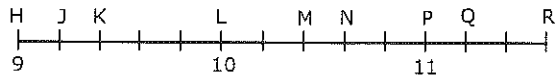


6. Find the area of circle A.
7. Find the area of circle B that is *not* covered by circle A.
8. Find the area circle C that is *not* covered by circle A or B.
9. Find the area of the dartboard that is *not* covered by circles A, B, or C.

The circles on the dartboard are painted on a rectangular piece of corkboard that is 2 feet by 30 inches. Find the probability of each event, assuming the dart always lands on the corkboard.

10. A random dart lands on one of the circles.
11. A random dart lands on circle C or D.
12. A random dart will make a bull's-eye.
13. A random dart falls only on circle C.

Use the points on the number line for problems 14-22.



14. Find the probability that a point on \overline{HR} lies between J and P .

15. Find the probability that a point on \overline{HR} lies between N and K .

16. Find the probability that a point on \overline{MN} lies between J and K .

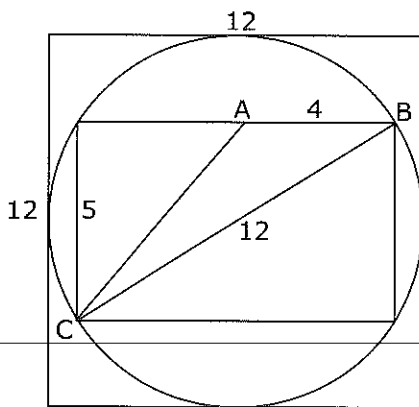
17. Find the probability that a point on \overline{LQ} lies between M and P .

18. The probability that point on \overline{JR} lies between _____ and _____ is 25%.

19. The probability that point on \overline{JQ} lies between _____ and _____ is 0.50.

20. The probability that point on \overline{KP} lies between _____ and _____ is $\frac{3}{4}$.

Triangle ABC is inscribed in a rectangle, which is inscribed in a circle, which is inscribed in a square. Express each probability as a percent to the nearest tenth.



21. What is the probability that a pebble dropped on the figure will land *only* in the triangle ABC ?

22. What is the probability that the pebble will land in the rectangle but *not* in the triangle ABC ?

23. What is the probability that the pebble will land in the circle, but *not* in the rectangle or triangle ABC ?

24. What is the probability that the pebble will land in the square, but not the circle, rectangle or triangle ABC ?