

Activity One: *Shamus Tabriz*

Name: _____

Use Tom Dimond's *Shamus Tabriz* to answer the following questions.

1. How many circles are in this artwork?

Describe how you got your answer.

Describe how this artwork has symmetry.

Activity Two: Circle in a Square

Name: _____

1. What is the area of the smaller square shown in the figure on the right?

2. What is the area of the larger square?

3. How many of the smaller squares will fit inside the larger square?

4. What is the area of the circle?

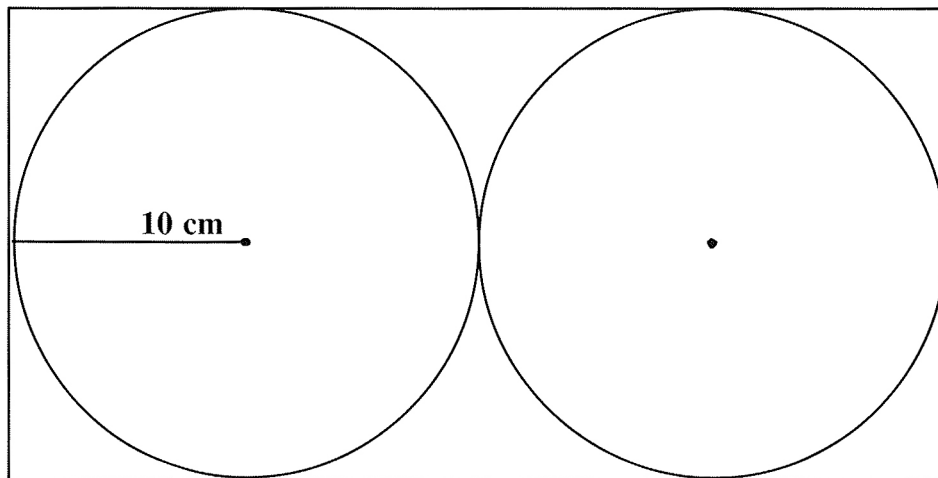
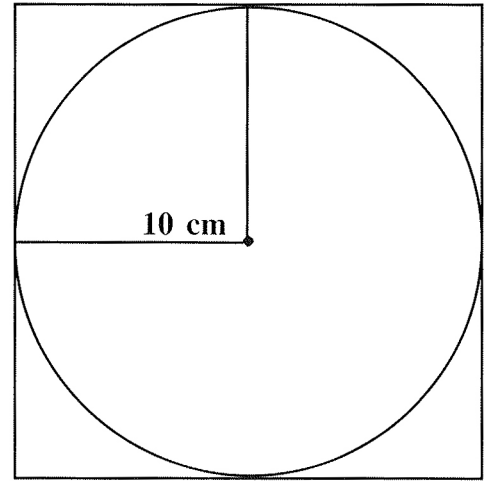
5. How many of the smaller squares will fit inside the circle?

6. What percent of the larger square is covered by the circle?

7. In the figure shown below, what is the sum of the areas of the two circles?

8. What is the area of the rectangle?

9. What percent of the rectangle is covered by the two circles?



Activity Two:

Circle in a Square continued

Name: _____

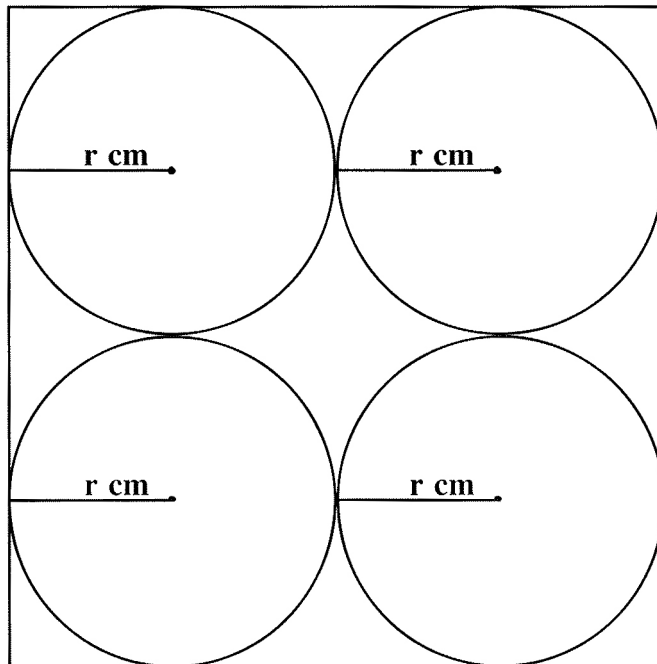
10. In the figure below, how long are the sides of the square in terms of r ?

11. What is the area of the square in terms of r ?

12. What is the sum of the areas of the four circles in terms of r ?

13. What fraction of the square is covered by the four circles?

14. What percent of the square is covered by the four circles?

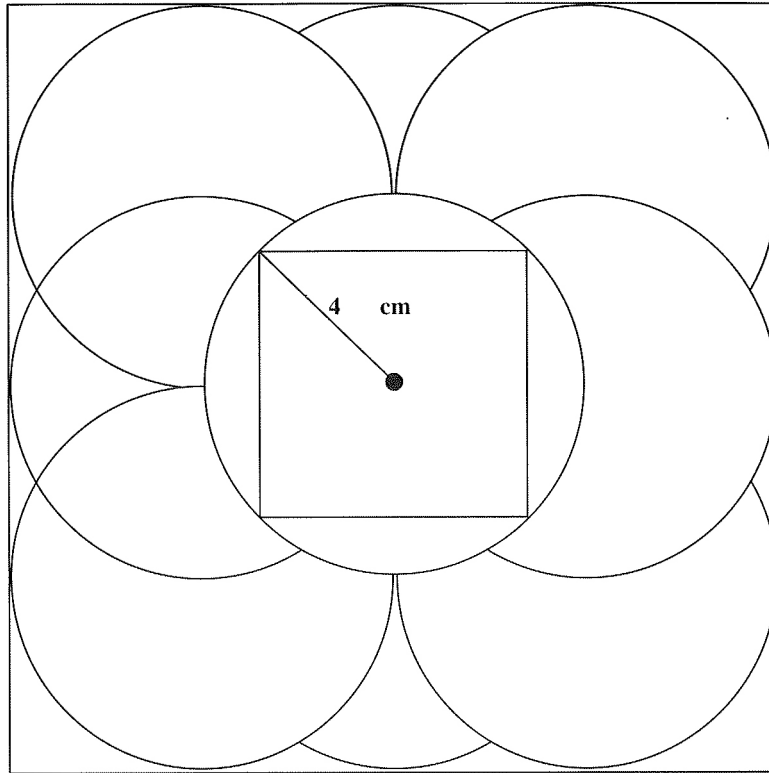


Activity Two:

Circle in a Square continued

Name: _____

All the circles in the figure below are the same size.



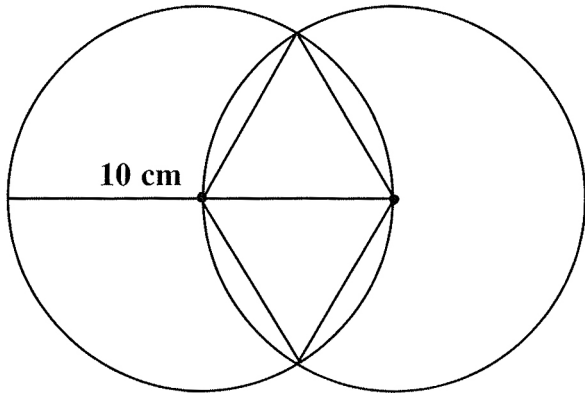
15. What is the area of the large square?

16. What is the area of the small square?

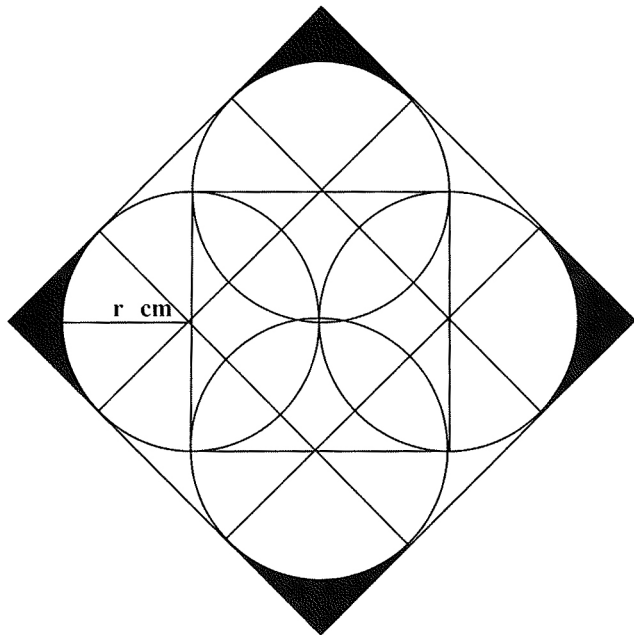
17. What is the ratio of the area of the large square to the area of the small square?

Challenge Activity!

Name: _____



1. Note that the circles touch each other's centers. What is the area of overlap of the two circles?



2. What is the area of the largest square?

3. What is the area of the region covered by the four circles?

4. What percent of the largest square is covered by the circles?

5. How does your answer for #4 compare with your answers in Activity Two, questions #6, #9, and #14? Explain.
