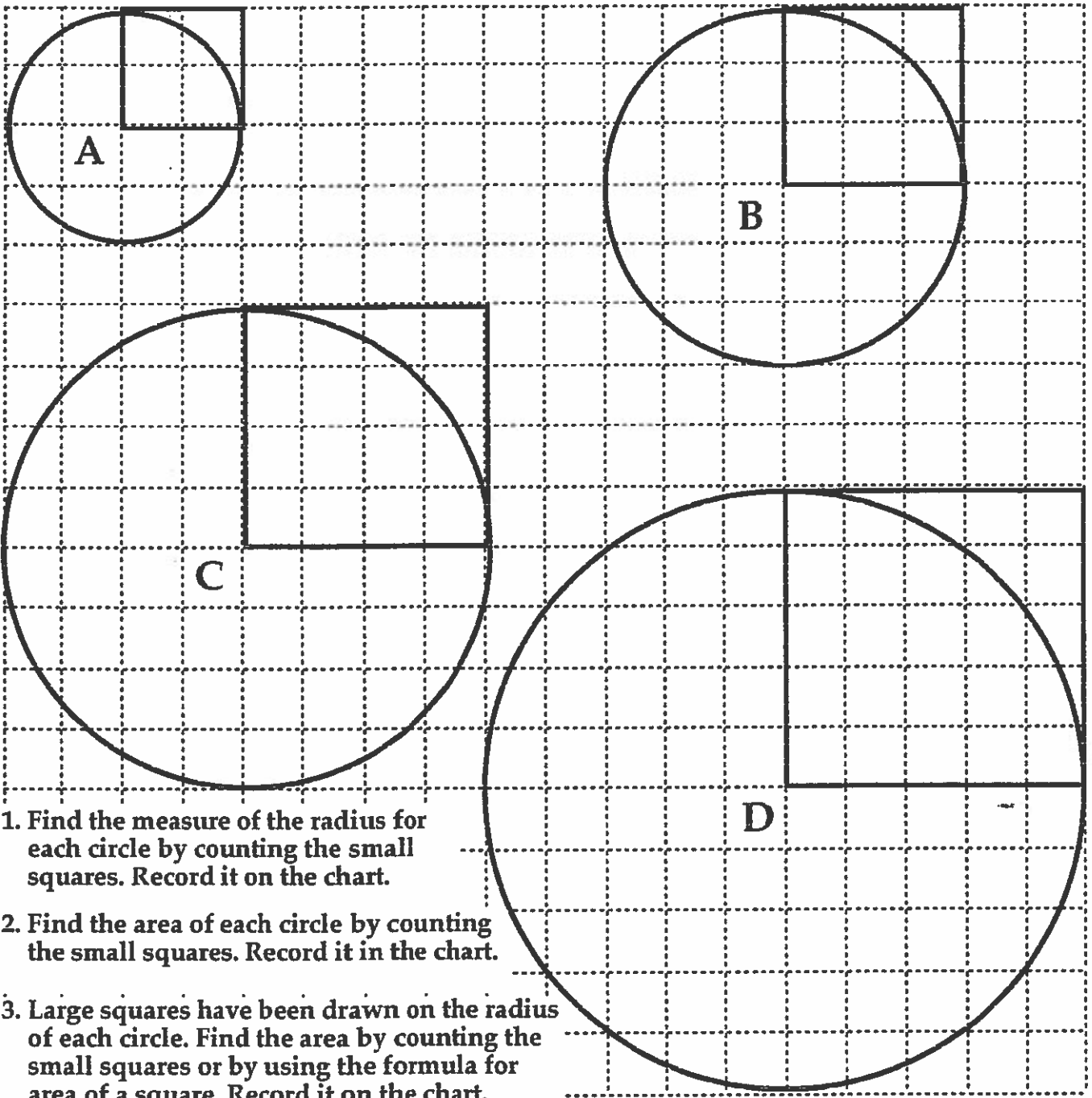


Date: \_\_\_\_\_

**Circle: The Relationship between Area of a Circle and its Radius**



1. Find the measure of the radius for each circle by counting the small squares. Record it on the chart.
2. Find the area of each circle by counting the small squares. Record it in the chart.
3. Large squares have been drawn on the radius of each circle. Find the area by counting the small squares or by using the formula for area of a square. Record it on the chart.

Circle	Radius	Area of Circle (approximate)	Area of Square	Area of Circle ÷ Area of Square
A	2 units	12.5 units	4 units	$12.5 \div 4 = 3.125$
B				
C				
D				

How many times greater is the area of each circle to its large square of its radius? \_\_\_\_\_

AREA of CIRCLE ÷ AREA of SQUARE = \_\_\_\_\_

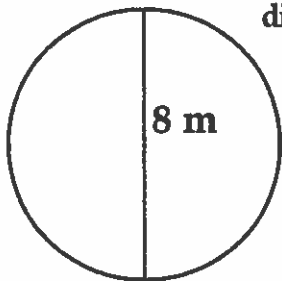
AREA of CIRCLE = \_\_\_\_\_

AREA = \_\_\_\_\_

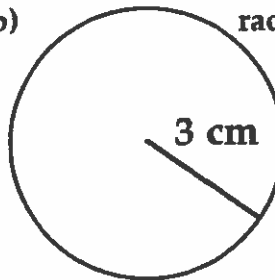
A = \_\_\_\_\_

EXAMPLES: Find the Area of the following circles.

a) diameter = 8 m



b) radius = 3 cm



If the diameter is 8 m,  
the radius must be 4 m:

$$A = \pi r^2$$

$$= 3.14 \times (4 \text{ m})^2$$

$$= 3.14 \times 16 \text{ m}^2$$

$$= 50.24 \text{ m}^2$$

$$A = \pi r^2$$

$$= 3.14 \times (3 \text{ cm})^2$$

$$= 3.14 \times 9 \text{ cm}^2$$

$$= 28.26 \text{ cm}^2$$

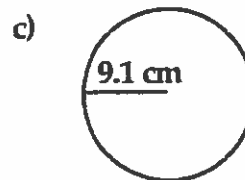
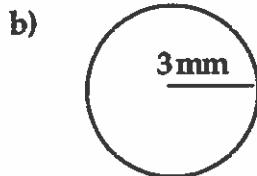
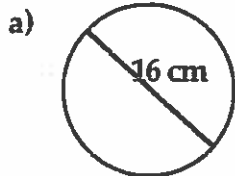
Formula is always written first

All work is shown in steps

Area units are always squared

Final answer rounded to  
two decimal places

Calculate the following Areas.



Find the Area of the following circles.

a. diameter = 14 cm

b. diameter = 18 m

c. diameter = 16 mm

d. radius = 5 m

e. radius = 4.8 cm

f. radius = 9.5 cm

g. radius = 12 cm

h. diameter = 30 cm

i. diameter = 15 cm