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1. Calculate the area of each circle. Express your answer both exactly (in terms of pi) and approximately, to the nearest tenth of a unit.

2. By calculating the areas of the square and the circle in the diagram, determine how many times larger in area the circle is than the square.

3. A circle with radius 8 centimeters is enlarged so its radius is now 24 centimeters.
a. By what scale factor did the circumference increase? Show your work or justify your answer.
b. By what scale factor did the area increase? Show your work or justify your answer.
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$\qquad$
4. How many circles of radius 1 " could fit in a circle with radius 5 " (if you could rearrange the area of the circles of radius 1 in such a way that you completely fill in the circle of radius 5)? Justify your answer.
5. The area of 4 objects is given. Calculate the radius of two object's surface, to the nearest hundredth of a unit.


Area of a glass in a porthole $3.14 \mathrm{ft}^{2}$


Area of side of a water tank $153.86 \mathrm{ft}^{2}$


Area of wicker table top $28.26 \mathrm{ft}^{2}$


Area of base
of trash can $12.56 \mathrm{ft}^{2}$

## Exit Ticket:

What I might need some more help with: How I feel about scale factor:


