Area of the Shaded Region

1) Virginia has a circular rug on her square living room floor. What is the area of the part of the floor that is NOT covered by the rug? Leave your answer in terms of π.


10 ft
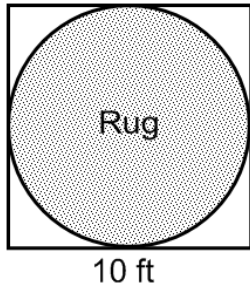
2) As shown in the diagram, radio station KMA is increasing its radio listening radius from 40 miles to 50 miles. How many additional square miles of listening area, to the nearest tenth, will the radio station gain?
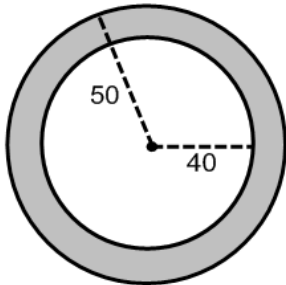
3) Find the area of the shaded region to the nearest integer

21 in
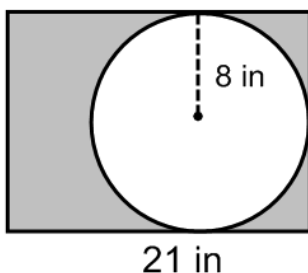
4) Ms. Brown plans to carpet part of her living room floor. The floor is a square and she wants to carpet a quarter-circle as shown below. Find, to the nearest square foot, what part of the floor will remain uncarpeted.

20 ft
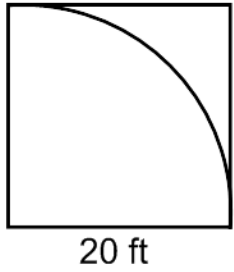
5) If pavement costs $0.78 per square foot, determine, to the nearest cent, the cost of paving the shaded circular road as shown in the diagram below.

50 ft

36 ft