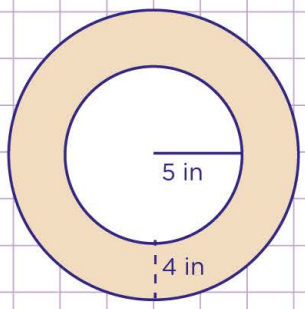
Name: ..... Class: .....

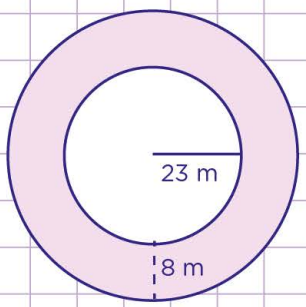
Area between two circles

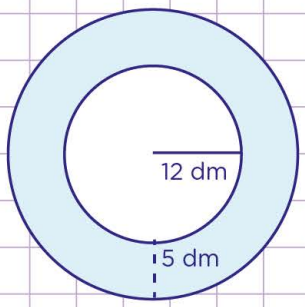
1. What is the area of the shaded region? Given that both circles have the same center.

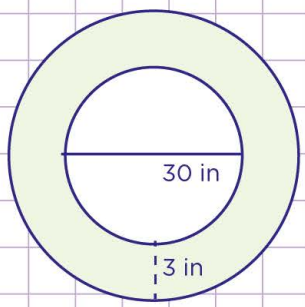
To calculate the area of the shaded region,
Subtract the area of the inner shape from
the area of the outer shape.



2. What is the area of the shaded region of the following circles?
Given that both circles have the same center. Solve on rough work paper.







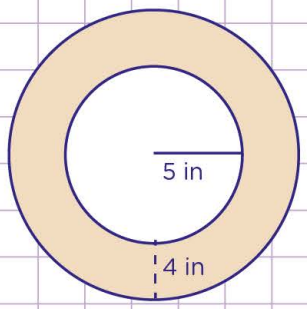
Solution

Name: ..... Class: .....

Area between two circles

1. What is the area of the shaded region?

Given that both circles have the same center.



To calculate the area of the shaded region, Subtract the area of the inner shape from the area of the outer shape.

Area of inner circle = πr^2
Radius = 5 in
Area = 3.14 x 5 x 5
= 78.5 in²

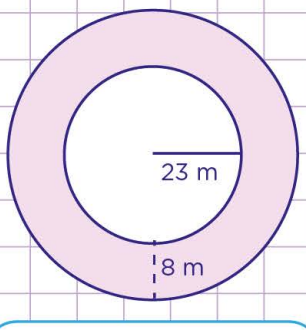
Area of outter circle = πr^2

When 2 circles share the same center, the radius of the outter circle equal to the radius of the inner circle plus the distance between the circles.
So r = 5 in + 4 in = 9 in
Area = 3.14 x 9 x 9
= 254.34 in²
Therefore, the area of the shaded region
= 254.34 in² - 78.5 in²
= 175,84 in²

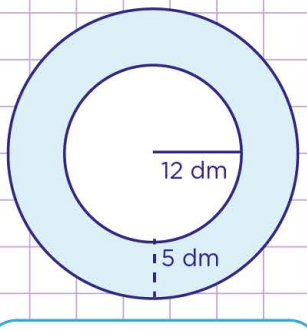
So, the area of the shaded region is 175,84 in².

2. What is the area of the shaded region of the following circles?

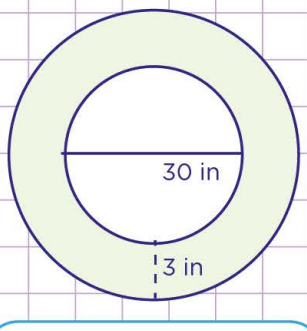
Given that both circles have the same center. Solve on rough work paper.



1, 356.48 m²



455.3 dm²



310.86 in²