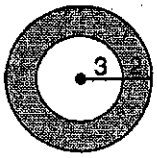
Name _____

Area of a Shaded Region

Example



Find the area of the shaded region. Leave the answer in terms of π.

1. Analyze the problem.

Area of the shaded ring = (Area of ●) – (Area of ○)

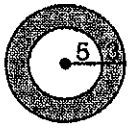
2. Review the needed area formula(s).

Area of a circle = πr^2

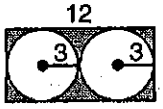
3. Solve.

Shaded area = $5^2\pi - 3^2\pi = 25\pi - 9\pi = 16\pi$ units^2

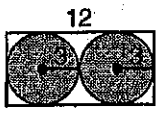
Match each diagram to its solution equation. Then find the area of each shaded region. Leave the answers in terms of π. Find and circle each answer in the box below.

1. 

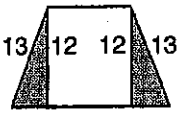
• (*A* of ▪) – (*A* of ○) = _____ units^2

2. 

• (*A* of ●) – (*A* of ○) = _____ units^2

3. 

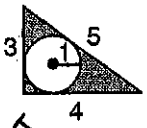
• (*A* of ●) + (*A* of ●) = _____ units^2

4. 

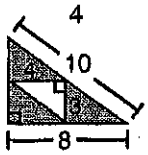
• (*A* of ▬) – (*A* of ○ + *A* of ○) = _____ units^2

5. 

• (*A* of ●) – (*A* of ◺) = _____ units^2

6. 

• (*A* of ◺) + (*A* of ◺) = _____ units^2

7. 

• (*A* of ◺) – (*A* of ○) = _____ units^2

8. 

• (*A* of ◺) – (*A* of ◺) = _____ units^2

$6 - \pi$	18	18π	$25\pi - 24$	39π	60	$64 - 16\pi$	$72 - 18\pi$