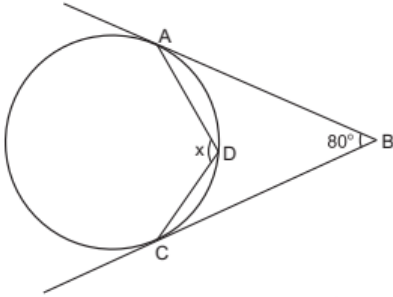
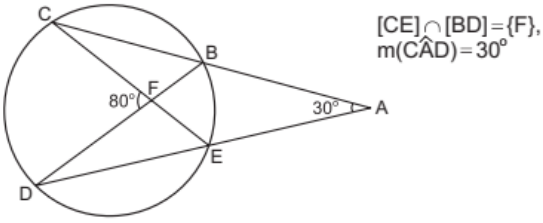


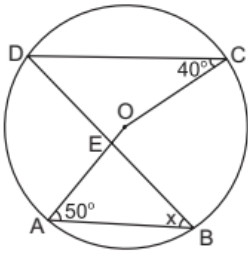
[AB] çaplı yarım çemberde, [BD] doğru parçasının uzunluğu yarıçap uzunluğuna eşit olduğuna göre, $m(\widehat{BCD})$ kaç derecedir?



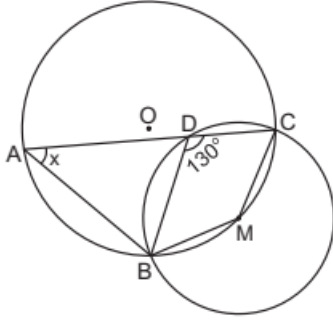
A ve C teğet değme noktaları ve $m(\widehat{ABC}) = 80^\circ$ olduğuna göre, x kaç derecedir?



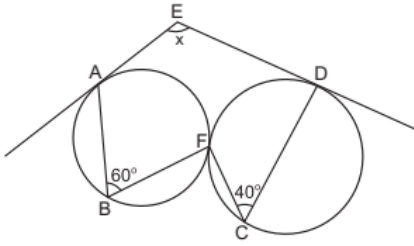
şekilde verilenlere göre, $m(\widehat{CD})$ kaç derecedir?



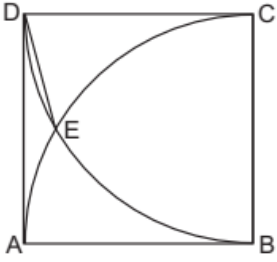
O merkezli çemberde,
 D,E,B doğrusal,
 $[AB] \parallel [CD]$,
 şekilde verilenlere
 göre, x kaçtır?



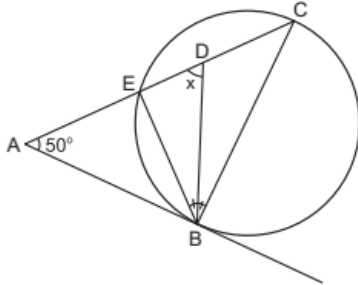
O ve M merkezli
çemberlerde
verilenlere göre,
BAC açısının
ölçüsü kaçtır?



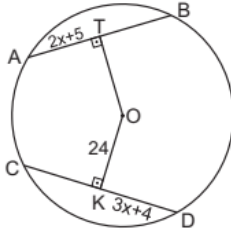
A,D ve F teğet değme noktaları, şekilde verilenlere
göre, **x kaç derecedir?**



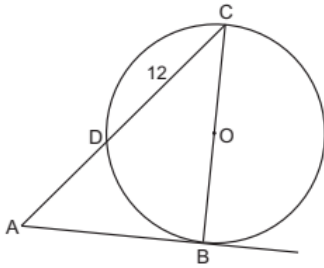
B ve C merkezli
çeyrek çemberler E
noktasında kesişiyor.
Buna göre, $m(\widehat{ADE})$
kaç derecedir?



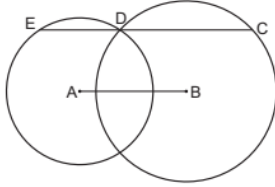
Yukarıdaki çemberde B teğet değme noktası,
[BD] açıortay, $m(\widehat{BAC})=50^\circ$ olduğuna göre,
x kaç derecedir?



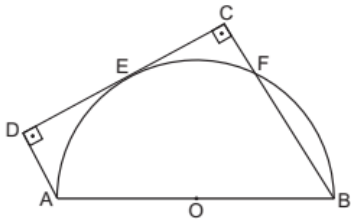
O merkezli çemberde,
 $|BT| = |KC|$ ve şekilde
 verilenlere göre,
çemberin yarıçapı
 kaç birimdir?



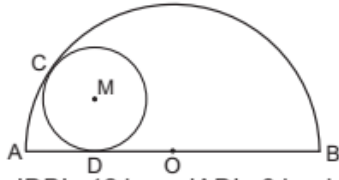
O merkezli çemberde B teğet değme noktası,
 $|AC| = 15$ br olduğuna göre, **çemberin yarıçapı**
 kaç birimdir?



A ve B merkezli çemberler D noktasında kesişiyor.
 $[AB] \parallel [CE]$ ve $|CE| = 10$ br olduğuna göre, $|AB|$
 kaç birimdir?

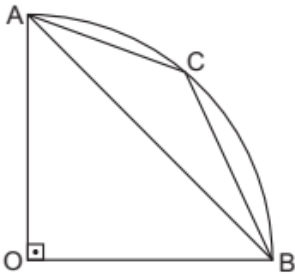


O merkezli yarım çemberde, E teğet değme noktası,
 $|AD| = 2$ br ve $|BC| = 10$ br olduğuna göre, $|AB|$ kaç
 birimdir?

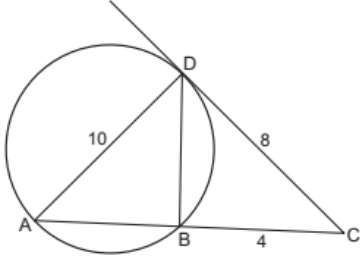


O merkezli yarım
çember ile
M merkezli çember
C noktasında içten
teğettir.

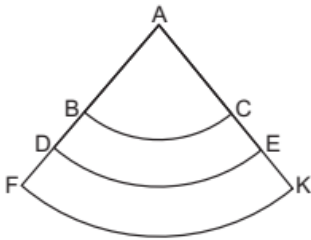
$|DB| = 12$ br ve $|AD| = 6$ br olduğuna göre, **M** merkezli
çemberin yarıçapı kaç birimdir?



O merkezli çeyrek
çemberde,
 $|BC| = 5$ br,
 $|AC| = 3\sqrt{2}$ br
olduğuna göre,
 $|AB|$ kaç birimdir?

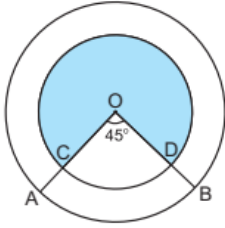


[CD çembere D noktasında teğet ve ACD üçgen, şekilde verilenlere göre, **|BD| kaç birimdir?**

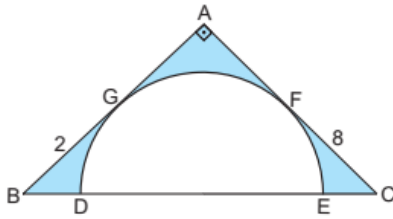


A merkezli çember yaylarında,
 $|AB| = x$ br,
 $|BD| = 4$ br,
 $|DF| = y$ br,

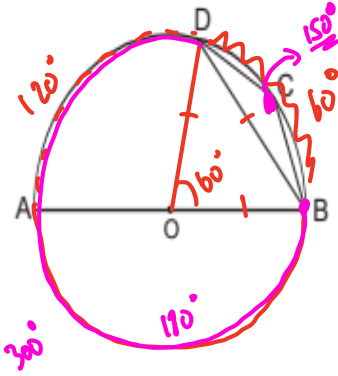
$5 \cdot |\widehat{BC}| = 3 \cdot |\widehat{DE}| = 2 \cdot |\widehat{FK}|$ olduğuna göre, **$x + y$ kaçtır?**



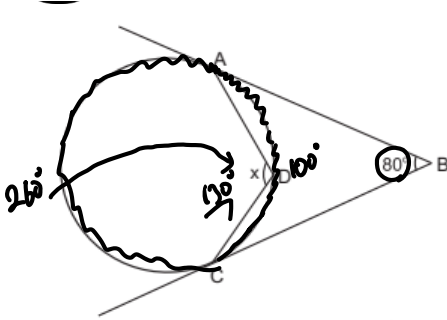
O merkezli çemberlerde,
 $|OD| = 3 \cdot |DB|$,
 $|AB| = 4\pi \text{ br}$,
 olduğuna göre, **taralı**
alan kaç br^2 dir?



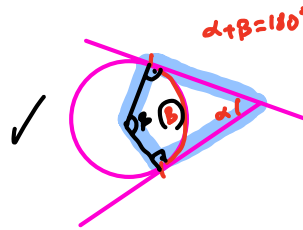
[DE] çaplı yarım çember, ABC üçgenine G ve F noktalarında teğettir. Şekilde verilenlere göre, **taralı alanlar toplamı kaç birimkaredir?**

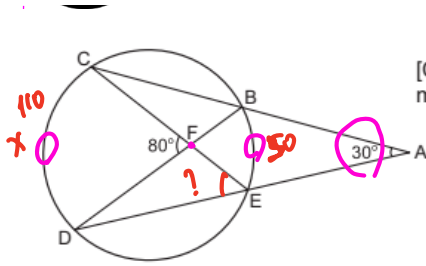


[AB] çaplı yarım çemberde, [BD] doğru parçasının uzunluğu yarıçap uzunluğuna eşit olduğuna göre, $m(\hat{BCD})$ kaç derecedir?



A ve C teğet değme noktaları ve $m(\hat{ABC}) = 80^\circ$ olduğuna göre, x kaç derecedir?





$[CE] \cap [BD] = \{F\}$,
 $m(\widehat{CAD}) = 30^\circ$

$$\begin{aligned} x - y &= 60 \\ x + y &= 160 \end{aligned}$$

$$\frac{x - y}{2} = 30$$

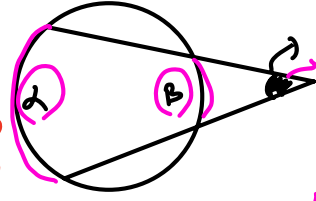
$$2x = 220$$

$$x = 110$$

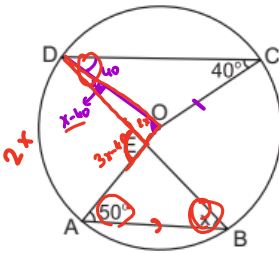
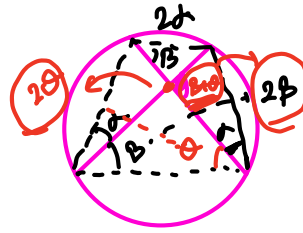
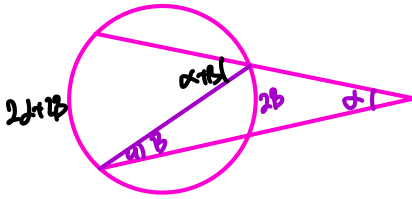
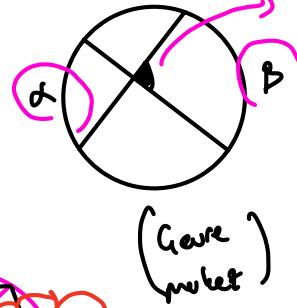
$$\frac{x + y}{2} = 80$$

şekilde verilenlere göre, $m(\widehat{CD})$ kaç derecedir?

Dış Açısı $\frac{\alpha - \beta}{2}$

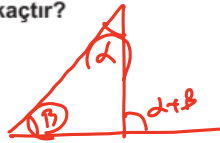


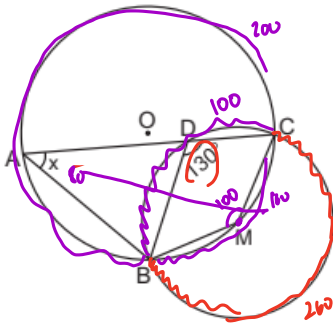
$\frac{\alpha + \beta}{2}$



O merkezli çemberde,
D, E, B doğrusal,
 $(AB) \parallel (CD)$
şekilde verilenlere
göre, x kaçtır?

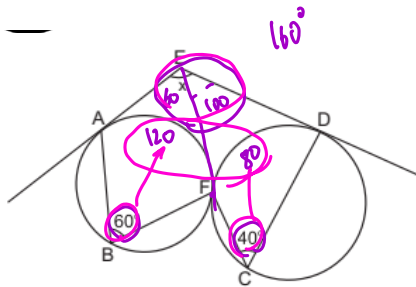
$$\begin{aligned} 50 + x &= 3x - 60 \\ 80 &= 2x \\ x &= 40 \end{aligned}$$



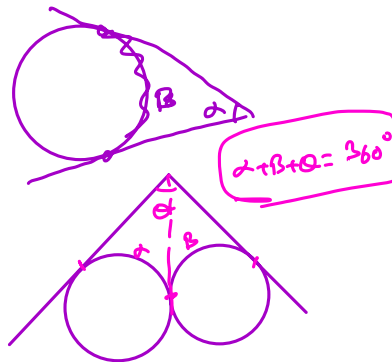


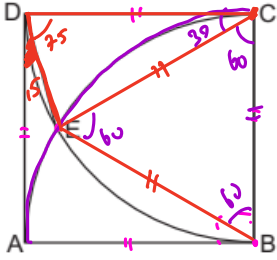
O ve M merkezli çemberlerde verilenlere göre, **BAC** açısının ölçüsü kaçtır?

$$2x = 160$$
$$x = 80$$

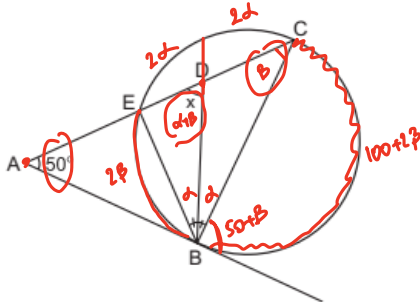


A, D ve F teğet değme noktaları, şekilde verilenlere göre, **x kaç derecedir?**



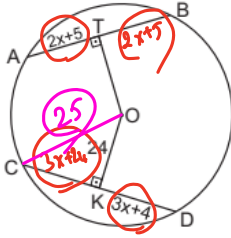


B ve C merkezli
çeyrek çemberler E
noktasında kesişiyor.
Buna göre, $m(\widehat{ADE})$
kaç derecedir? 15°



$$\begin{aligned} 4B + 4d + 100 &= 360 \\ 4B + 4d &= 260 \\ \frac{260}{4} &= 65 \\ 2d + B &= 65 \end{aligned}$$

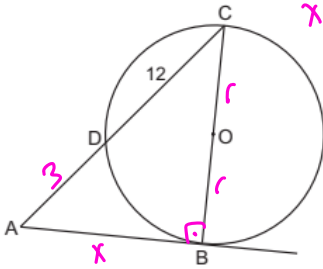
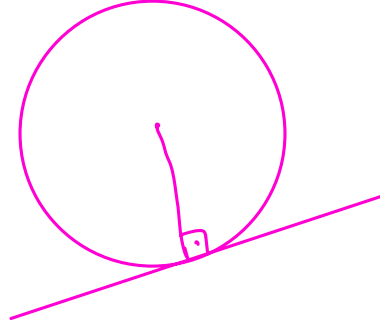
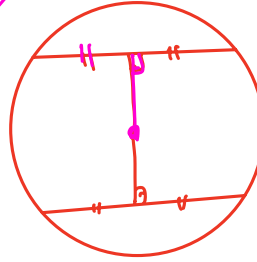
Yukarıdaki çemberde B teğet değme noktası,
[BD] açıortay, $m(\widehat{BAC})=50^\circ$ olduğuna göre,
x kaç derecedir?



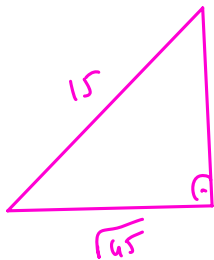
O merkezli çemberde, $|BT| = |KC|$ ve şekilde verilenlere göre, çemberin yarıçapı kaç birimdir?

$$2x+5 = 3x+4$$

$$x = 1$$



O merkezli çemberde B teğet değme noktası, $|AC| = 15$ br olduğuna göre, çemberin yarıçapı kaç birimdir?



$$x^2 = 3 \cdot 15$$

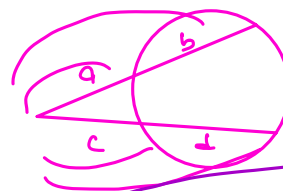
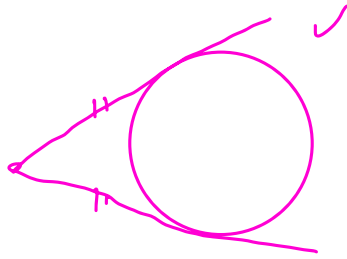
$$x^2 = 45$$

$$225 = 4r^2 + 45$$

$$4r^2 = 180$$

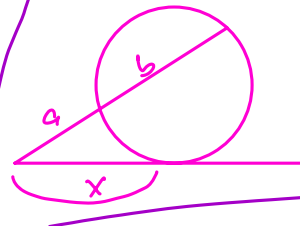
$$r^2 = 45$$

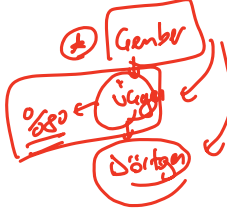
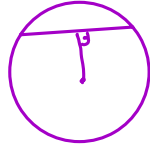
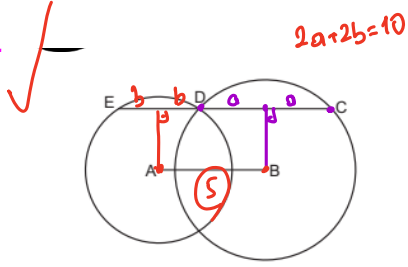
$$r = 3\sqrt{5}$$



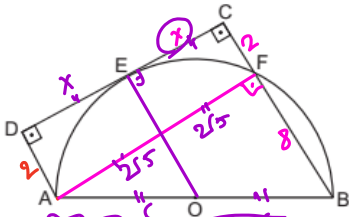
$$a \cdot (a+b) = c \cdot (c+d)$$

$$x^2 = a \cdot (a+b)$$

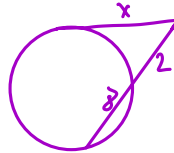
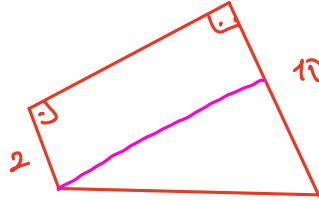




A ve B merkezli çemberler D noktasında kesişiyor.
[AB] // [CE] ve |CE| = 10 br olduğuna göre, |AB| kaç birimdir?

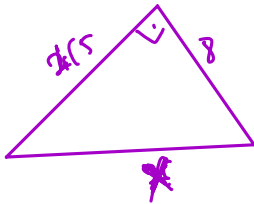


O merkezli yarım çemberde, E teğet değme noktası,
|AD| = 2 br ve |BC| = 10 br olduğuna göre, |AB| kaç birimdir?



$$x^2 = 2 \cdot 10$$

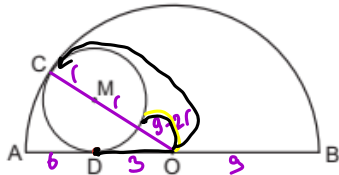
$$x^2 = 20$$



$$x^2 = 8^2 + (6/5)^2$$

$$x^2 = 64 + 80$$

$$x^2 = 144$$



O merkezli yarım
çember ile
M merkezli çember
C noktasında içten
teğettir.

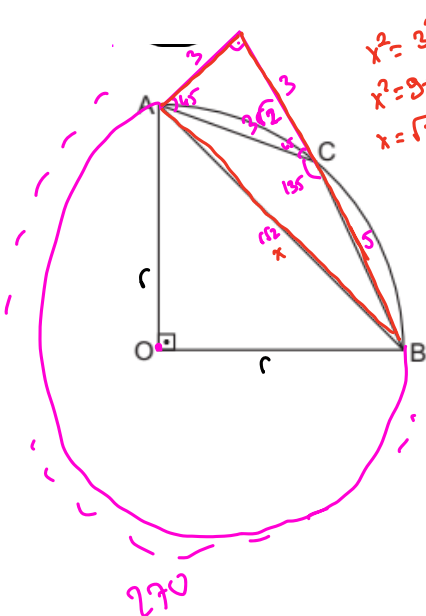
$|DB|=12$ br ve $|AD|=6$ br olduğuna göre, M merkezli
çemberin yarıçapı kaç birimdir?

$$\cancel{g} = (g - 2r) \cdot \cancel{g}$$

$$9 - 2r = 1$$

$$2r = 8$$

$r = 4$

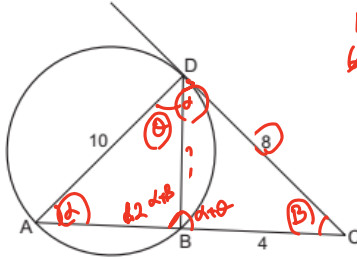


$$x^2 = 3^2 + 8^2$$

$$x^2 = 9 + 64$$

$$x = \sqrt{73}$$

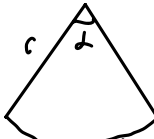
O merkezli çeyrek
çemberde,
 $|BC| = 5$ br,
 $|AC| = 3\sqrt{2}$ br
olduğuna göre,
 $|AB|$ kaç birimdir?



$$16 = x \cdot (4 + x)$$

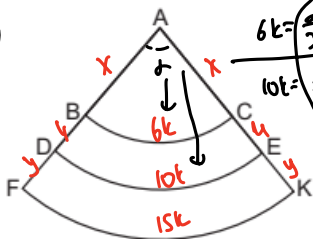
$$\frac{16}{8} = \frac{10}{x} \quad x=5$$

[CD çembere D noktasında teğet ve ACD üçgen, şekilde verilenlere göre, |BD| kaç birimdir?

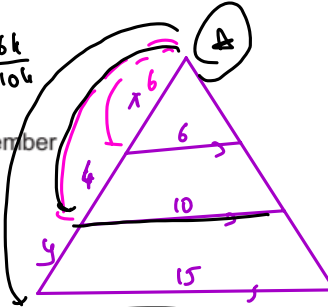


$$2\pi r \cdot \frac{\alpha}{360}$$

$$\frac{x}{x+4} = \frac{6k}{10k}$$



A merkezli çember
ayrılarında,
|AB| = x br,
|BD| = 4 br,
|DF| = y br,



$$\frac{x}{x+4} = \frac{6}{10}$$

$$10x = 6x + 24$$

$$4x = 24$$

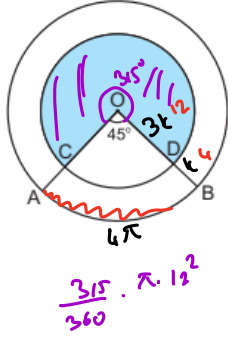
$$x = 6$$

5. |BC| = 3 · |DE| = 2 · |FK| olduğuna göre, x + y kaçtır?

$$\begin{matrix} \downarrow & \downarrow & \downarrow \\ 6k & 10k & 15k \end{matrix}$$

$$\frac{10}{10+y} = \frac{10}{15}$$

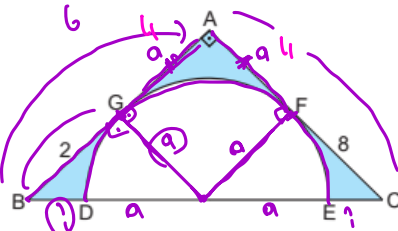
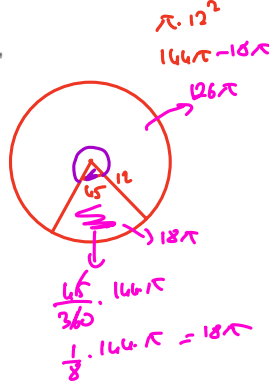
$$y=5$$



O merkezli çemberlerde,
 $|OD| = 3 \cdot |DB|$,
 $|AB| = 4\pi$ br,
olduğuna göre, **taralı**
alan kaç br² dir?

$$\frac{45}{360} \cdot 2 \cdot \pi \cdot 4k = 4\pi$$

$$\frac{1}{8} \cdot 8k = 4$$

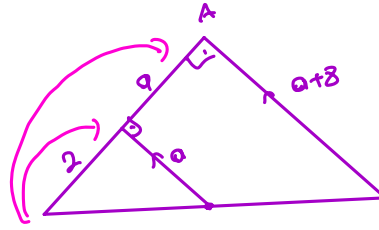


[DE] çaplı yarım çember, ABC üçgenine G ve F noktalarında teğettir. Şekilde verilenlere göre, **taralı alanlar toplamı kaç birimkaredir?**

$$36 - 8\pi$$

$$\frac{6 \cdot 12}{2} = 36$$

$$\frac{\pi \cdot r^2}{2} = \frac{\pi \cdot 16}{2} = 8\pi$$



$$\frac{2}{2+a} = \frac{a}{a+8}$$

$$2a+16 = 2a+a^2$$

$$a=4$$