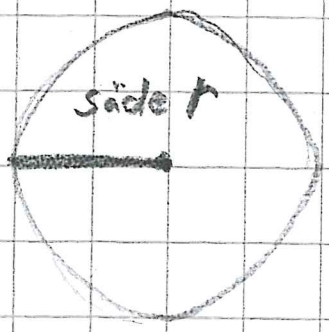
Ympyrä



pii $\pi \approx 3{,}14$

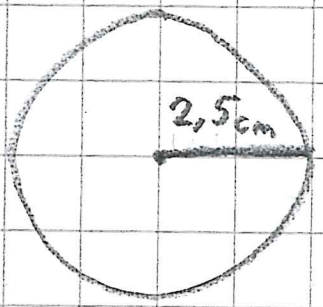
Kehän pituus (ympyrän piiri)

$$p = 2\pi r$$

Ympyrän pinta-ala

$$A = \pi r^2$$

esim.



$$p = 2 \cdot 3{,}14 \cdot 2{,}5\ \text{cm}$$
$$= 15{,}7\ \text{cm}$$
$$\approx 16\ \text{cm}$$

$$A = 3{,}14 \cdot (2{,}5\ \text{cm})^2$$
$$= 19{,}625\ \text{cm}^2$$
$$\approx 20\ \text{cm}^2$$

piiri s. 207

947

pinta-ala s. 210

962

947

$p = 2 \pi r$

a) $p = 2 \cdot 3{,}14 \cdot 9\,m$
$= 56{,}52\,m \approx 57\,m$

b) $p = 2 \cdot 3{,}14 \cdot 47\,mm$
$= 295{,}16\,mm \approx 295\,mm$
(tm. $\approx 300\,mm$)

c) $p = 2 \cdot 3{,}14 \cdot 3{,}5\,km$
$= 21{,}98\,km \approx 22\,km$

d) $p = 2 \cdot 3{,}14 \cdot 18{,}7\,cm$
$= 117{,}436\,cm \approx 117\,cm$

S. 210

962

$A = \pi r^2$

a) $A = 3{,}14 \cdot 4\,cm \cdot 4\,cm$
$= 50{,}24\,cm^2 \approx 50\,cm^2$

b) $A = 3{,}14 \cdot 15\,m \cdot 15\,m$
$= 706{,}5\,m^2 \approx 707\,m^2$
($\approx 710\,m^2$)

c) $A = 3{,}14 \cdot 18\,mm \cdot 18\,mm$
$= 1017{,}36\,mm^2$
$\approx 1017\,mm^2$
$\approx 1020\,mm^2$
$\approx 1000\,mm^2$

d) $A = 3{,}14 \cdot 20\,km \cdot 20\,km$
$= 1256\,km^2$