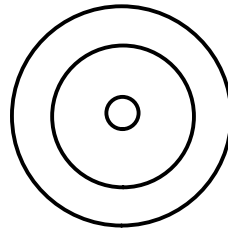


esim. Tihkateulet, 2 cm

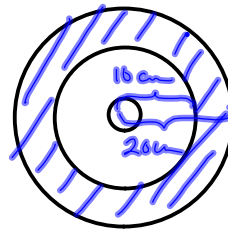
$$A = \bar{\pi} r^2$$
$$A_{\text{teko}} = \bar{\pi} \cdot 20^2 \text{ cm}^2$$
$$= 400 \bar{\pi} \text{ cm}^2 = n$$



a) $A =$ yhdellä tikalla saadaan tulos 10^4
 $r = 2 \text{ cm}$

$$P(A) = \frac{k}{n} = \frac{\cancel{\bar{\pi}} \cdot 2^2 \text{ cm}^2}{\cancel{\bar{\pi}} \cdot 20^2 \text{ cm}^2} = \frac{\cancel{4}}{400} = \frac{1}{100} = 0,01 = \underline{\underline{1\%}}$$

b) $B =$ yhdellä tikalla saadaan tulos
5 tai pienempi



Suotuisa alue on rengas,
jonka sisin säde on 10 cm ja
uloin säde 20 cm.

$$A_{\text{rengas}} = \bar{\pi} \cdot 20^2 \text{ cm}^2 - \bar{\pi} \cdot 10^2 \text{ cm}^2$$

$$P(B) = \frac{k}{n} = \frac{(\bar{\pi} \cdot 20^2 - \bar{\pi} \cdot 10^2) \text{ cm}^2}{\bar{\pi} \cdot 20^2 \text{ cm}^2}$$
$$= \frac{400 \bar{\pi} - 100 \bar{\pi}}{400 \bar{\pi}}$$
$$= \frac{\cancel{300 \bar{\pi}}}{\cancel{400 \bar{\pi}}} = \frac{3}{4}$$
$$= 0,75 = 75\%$$

V: Tod. väk. on 75%.

c) $C =$ yhdellä tikalla saadaan tulos 1^4

KI

19%

94

a) $A_1 = \pi r^2$ $A_2 = \pi \left(\frac{1}{2}r\right)^2 = \frac{1}{4}\pi r^2$

b) $A_3 = A_1 - A_2 = \pi r^2 - \pi \left(\frac{1}{2}r\right)^2 = \pi r^2 - \frac{1}{4}\pi r^2 = \frac{3}{4}\pi r^2$

a) $P(\text{piste on lähempänä keskispiseltä}) = \frac{k}{n} = \frac{A_2}{A_1} = \frac{\pi \cdot \left(\frac{1}{2}r\right)^2}{\pi r^2} = \frac{1}{4}$

b. $P(\text{piste on lähempänä kehää}) = \frac{k}{n} = \frac{A_3}{A_1} = \frac{\pi r^2 - \pi \left(\frac{1}{2}r\right)^2}{\pi r^2} = \frac{\pi r^2 - \frac{1}{4}\pi r^2}{\pi r^2} = \frac{\frac{3}{4}\pi r^2}{\pi r^2} = \frac{3}{4}$

100 $x + y = 100 \text{ cm}$

a) $\frac{k}{n} = \frac{A_2}{A_1} = \frac{\frac{1}{4}\pi r^2}{\pi r^2} = \frac{1}{4} \cdot \frac{1}{1} = \frac{1}{4}$

b)