21.3.21

822 a) $d = 35\,cm$ $r = 17{,}5\,cm$

$U = d \cdot \pi$ $A = r^2 \cdot \pi$

$U = 35 \cdot \pi$ $A = 17{,}5^2 \cdot \pi$

$U = 109{,}96\,cm$ $A = 962{,}11\,cm^2$

b) $d = 8{,}7\,dm$ $r = 4{,}35\,dm$

$U = d \cdot \pi$ $A = r^2 \cdot \pi$

$U = 8{,}7 \cdot \pi$ $A = 4{,}35^2 \pi$

$U = 27{,}33\,dm$ $A = 59{,}45\,dm^2$

c) $d = 1{,}45\,m$ $r = 0{,}73\,m$ $0{,}725$

$U = d \cdot \pi$ $A = r^2 \cdot \pi$

$U = 1{,}45 \cdot \pi$ $A = 0{,}73^2 \cdot \pi$

$U = 4{,}56\,m$ $A = 1{,}67\,m^2$

d) $d = 4{,}5\,m$ $r = 2{,}25\,m$

$U = d \cdot \pi$ $A = r^2 \cdot \pi$

$U = 4{,}5 \cdot \pi$ $A = 2{,}25^2 \cdot \pi$

$U = 14{,}14\,m$ $A = 15{,}90\,m^2$

e) $d = 2{,}05\,m$ $r = 1{,}03\,m$ $1{,}025$

$U = d \cdot \pi$ $A = r^2 \cdot \pi$

$U = 2{,}05 \cdot \pi$ $A = 1{,}03^2 \cdot \pi$

$U = 6{,}44\,m$ $A = 3{,}33\,m^2$

$\frac{\pi}{\pi}$

481 $d = 20\,cm$ $r = 10\,cm$

$A = r^2 \cdot \pi$

$A = 10^2 \cdot \pi$

$A = 314{,}16\,cm^2$

A	€
314,16	5,10
x	1

$x = 61{,}6\,cm^2$

$d = 30\,cm$ $A = r^2 \cdot \pi$

$A = 15^2 \pi$

$A = 706{,}86\,cm^2$

A	€
706,86	9,50
x	1

$x = 74{,}41\,cm^2$

$d = 40\,cm$

$A = r^2 \pi$

$A = 20^2 \pi$

$A = 1256{,}64\,cm^2$

A	€
1256,64	17,90
x	1

$x = 70{,}20\,cm^2$

Man muss $d = 30\,cm$ Pizza wählen

818 a) $r = 1{,}73\,m$

$A = r^2\pi$ $\quad A = 9{,}40\,m^2$

$A = 1{,}73^2 \cdot \pi$

b) $r = 3{,}75\,m$

$A = 3{,}75^2 \cdot \pi$

$A = 44{,}18\,m^2$

c) $d = 5{,}06\,m : 2$

$r = 2{,}53\,m$

$A = 2{,}53^2 \cdot \pi$

$A = 20{,}11\,m^2$

d) $d = 7{,}04\,m : 2$

$r = 3{,}52\,m$

$A = 3{,}52^2 \cdot \pi$

$A = 38{,}93\,m^2$

e) $r = 20{,}6\,m$

$A = 20{,}6^2 \cdot \pi$

$A = 1333{,}17\,m^2$

$r = 1{,}00\,cm$

$U = 2r \cdot \pi$

$U = 2 \cdot 1 \cdot \pi$

$U = 2\pi\,cm$

$r = 1\,cm$

$A = 1^2 \cdot \pi$

$A = \pi\,cm^2$

a) $r = 30\,mm$

$U = 2r \cdot \pi$

$U = 2 \cdot 30 \cdot \pi$

$U = 60\pi\,mm$

a) $A = 30^2 \cdot \pi$

$A = 900\pi\,mm^2$

b) $r = 10\,cm$

$U = 2r \cdot \pi$

$U = 2 \cdot 10 \cdot \pi$

$U = 20 \cdot \pi\,cm$

b) $A = 10^2 \cdot \pi$

$A = 100 \cdot \pi\,cm^2$

c) $r = 15\,cm$

$U = 2r \cdot \pi$

$U = 2 \cdot 15 \cdot \pi$

$U = 30 \cdot \pi\,cm$

c) $A = 15^2 \cdot \pi$

$A = 225 \cdot \pi\,cm^2$

c) $r = z\,cm$

$U = 2z \cdot \pi\,cm$

$A = r^2 \cdot \pi$

$A = z^2 \cdot \pi\,cm^2$

d) $r = 3{,}2\,cm$

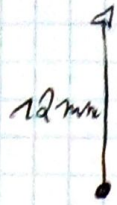
$U = 2r \cdot \pi$

$U = 2 \cdot 3{,}2 \cdot \pi$

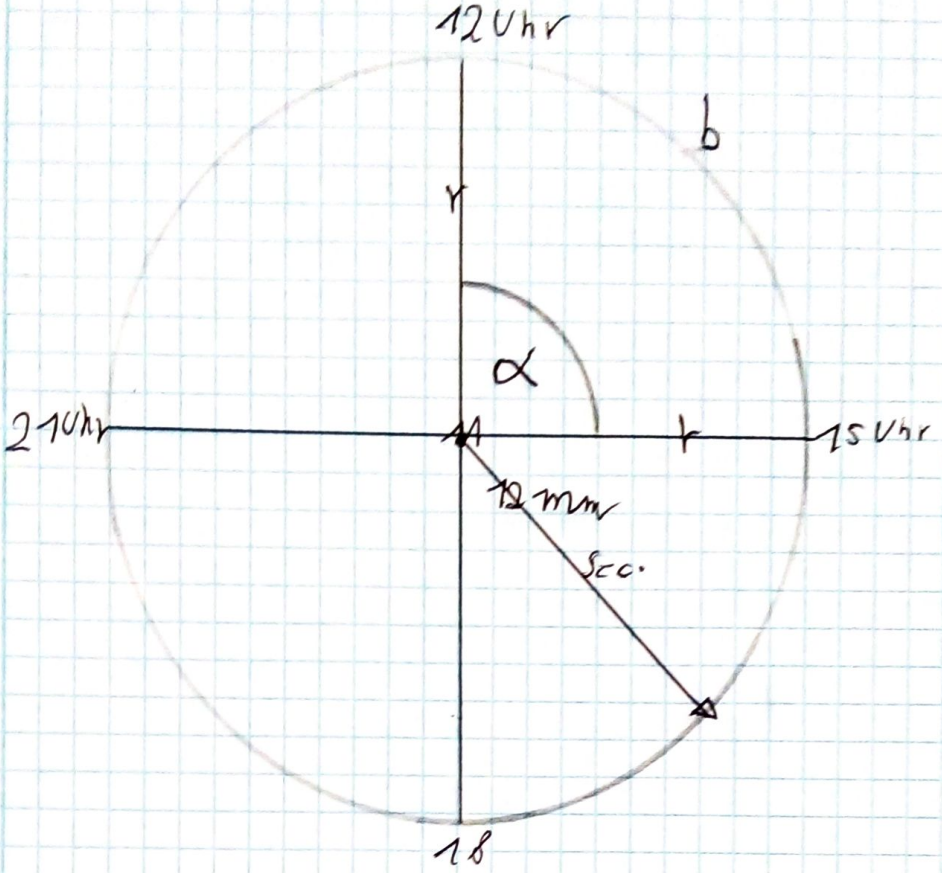
$U = 6{,}4\,cm$

$A = 3{,}2^2 \cdot \pi$

$A = 10{,}24\,cm^2$



360°



1xd = 24h

~~1 min = 60 sec.~~

1x h = 60 min

1 min = 60 sec. = 360°

r = 12 mm

$U = d \cdot \pi$

$U = 2r \cdot \pi$

U = 75,40 mm

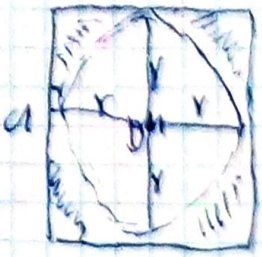
~~Der Sekundenzeiger~~

Der Sekundenzeiger leigt in einem Tag 108576 mm zurück

75,40 · 1440 = 108576

4)

a = 15 cm



r = 7,5 cm

$A = r^2 \cdot \pi$

$A = 7,5^2 \cdot \pi$

$A = 176,71\ cm^2$

$A = a \cdot a = a^2$

$A = 15 \cdot 15 =$

$A = 225\ cm^2$

48,29 cm² werden weggeworfen. Das sind 21,46 %

cm^2	%
225	100
48,29	x

$$x = \frac{48,29 \cdot 100}{225}$$

$$x = 21,46$$

8/04

r = 16 m

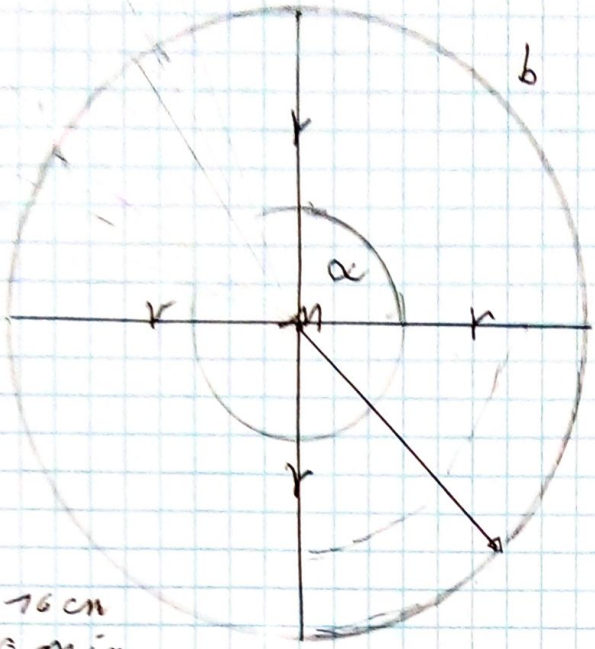
$\alpha = 50°$

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

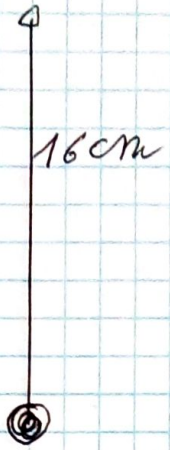
$$b = \frac{2 \cdot 16\ \pi \cdot 50°}{360}$$

$b = 13,96\ m$

90
90
90
30
300



60 min 360°
50 min x



Spitze 16 cm
Zeit 50 min

$$\frac{60\,\text{min} \;\big|\; 360}{50\,\text{min} \;\big|\; x^\circ} \qquad x = \frac{360 \cdot 50}{60} = 300$$

$$b = \frac{2 \cdot 16 \cdot \pi \cdot 300^\circ}{360}$$

~~$b = 0,1 \cdot 3$~~

$$b = \frac{80\pi}{3} = 83,78\,\text{cm}$$

① $G = 83\,879\ km^2$ $\quad r = ?$

$A = r^2 \pi$

$83\,879 = r^2 \pi \mid : \pi$

$\frac{83\,879}{\pi} = r^2 \mid \sqrt{\ }$

$\sqrt{\frac{83\,879}{\pi}} = r$

$r = 163{,}4\ km$

$A = \frac{G \cdot p}{100}$

② $a = 30\ cm$
$b = 120\ cm$
$A = r^2 \pi$
$A = 5^2 \pi$
$A = 78{,}538 \cdot 9$

$A = a^2$
$A = 900\ cm^2$

$A = \frac{900 \cdot p}{100}$

$706{,}86 = \frac{900 \cdot p}{100} \mid : 9$

$\frac{706{,}86}{9} = p$

$p = 78{,}54\ \%$

① $= 10\ cm$ $\quad r = 5\ cm$

Die Kreis Flächen sind $706{,}86\ cm^2$

225π

b $A = 9 r^2 \pi$

$r = 15\ cm$
$d = 30\ cm$

$A = r^2 \pi$
$A = 15^2 \pi$
$A = 706{,}86$
225π

d) Beide Flächen sind gleich