Grönkurs AREA

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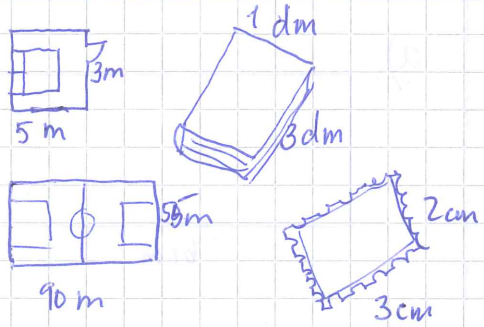
1. a) Sovrum $15\ m^2$

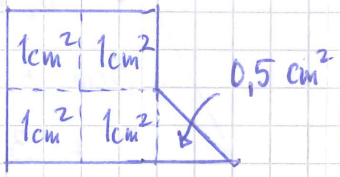
b) En boksida $3\ dm^2$

c) Fotbollsplan $5000\ m^2$

d) Ett frimärke $6\ cm^2$

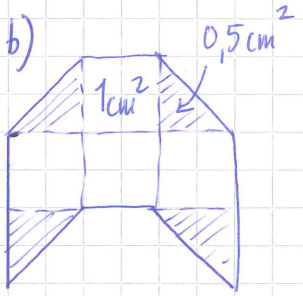


2 a)



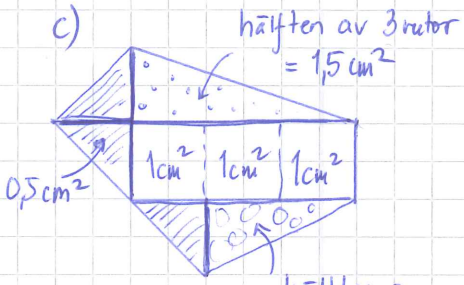
$A = 4{,}5\ cm^2$

b)



$A = 4 \cdot 1\,cm^2 + 4 \cdot 0{,}5\,cm^2$
$= 4\,cm^2 + 2\,cm^2$
$= 6\,cm^2$

c)



$A = 3 \cdot 1\,cm^2 + 3 \cdot 0{,}5\,cm^2$
$+ 1{,}5\,cm^2 + 1\,cm^2$
$= 3\,cm^2 + 1{,}5\,cm^2 + 1{,}5\,cm^2 + 1\,cm^2$
$= 7\,cm^2$

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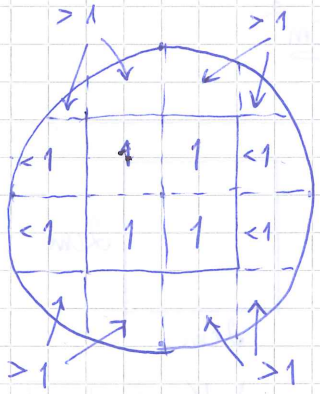
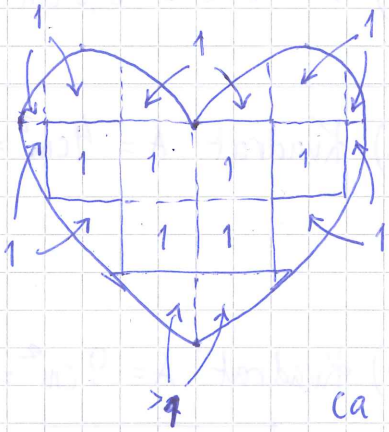
3 a)



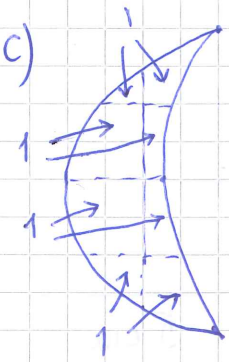
ca $12\ cm^2$

b)



ca $12\ cm^2$

c)



ca $4\ cm^2$

Grönkurs

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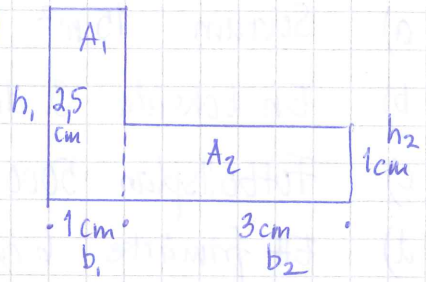
REKTANGELNS AREA

4

a)

$A = b \cdot h = 6cm \cdot 2cm = \underline{\underline{12 cm^2}}$

b)



$A = A_1 + A_2$

$= b_1 \cdot h_1 + b_2 \cdot h_2$

$= 1cm \cdot 2,5cm + 3cm \cdot 1cm$

$= 2,5 cm^2 + 3 cm^2$

$= \underline{\underline{5,5 cm^2}}$

5

a) $b = 2,5 cm$

$l = 6cm$

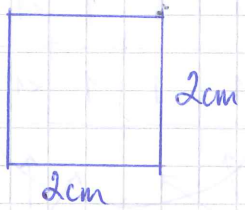
bredd kortare sida

längd längre sida

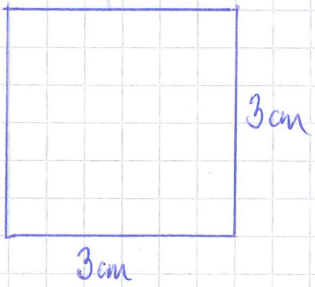
b) $A = b \cdot l = 2,5 cm \cdot 6cm = \underline{\underline{15 cm^2}}$

6

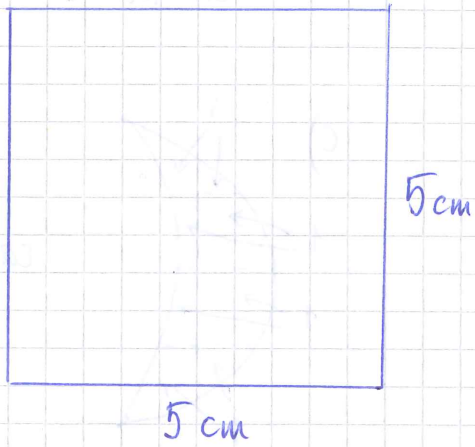
a) Kvadrat $A = 4cm^2 = 2cm \cdot 2cm$



b) Kvadrat $A = 9 cm^2 = 3 cm \cdot 3cm$



c) Kvadrat $A = 25 cm^2 = 5cm \cdot 5cm$



Grön kurs

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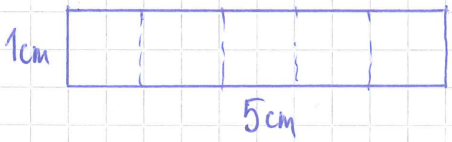
REKTANGELNS AREA

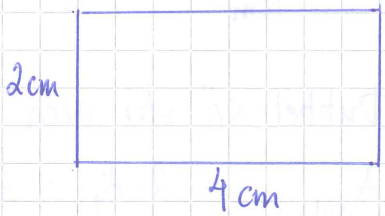
7 Rektangelns omkrets $O = 12\,cm$

$O = 12\,cm = 2 \cdot 1\,cm + 2 \cdot 5\,cm$



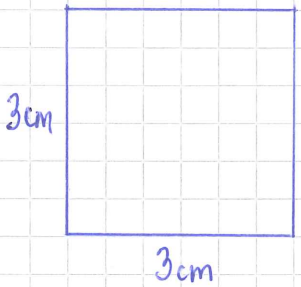
$A = 5\,cm \cdot 1\,cm = \underline{\underline{5\,cm^2}}$

$O = 12\,cm = 2 \cdot 2\,cm + 2 \cdot 4\,cm$



$A = 4\,cm \cdot 2\,cm = \underline{\underline{8\,cm^2}}$

$O = 12\,cm = 4 \cdot 3\,cm$



$A = 3\,cm \cdot 3\,cm = \underline{\underline{9\,cm^2}}$

OBS!

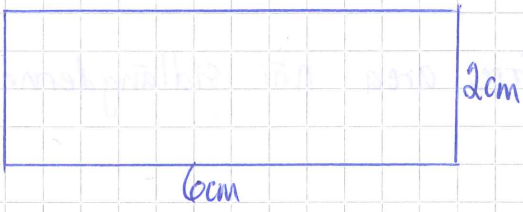
Kvadraten har alltid störst area av de rektanglar som har lika stor omkrets!

8 Rektangelns area $A = 12\,cm^2$

$A = 12\,cm^2 = 1\,cm \cdot 12\,cm$

$O = 2 \cdot 12\,cm + 2 \cdot 1\,cm = 24\,cm + 2\,cm = \underline{\underline{26\,cm}}$

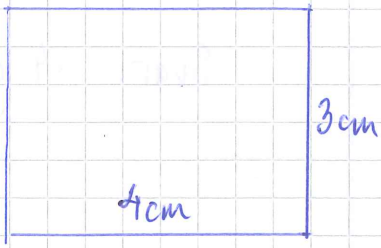
$A = 12\,cm^2 = 2\,cm \cdot 6\,cm$



$O = 2 \cdot 6\,cm + 2 \cdot 2\,cm$

$= 12\,cm + 4\,cm = \underline{\underline{16\,cm}}$

$A = 12\,cm^2 = 3\,cm \cdot 4\,cm$



$O = 2 \cdot 4\,cm + 2 \cdot 3\,cm$

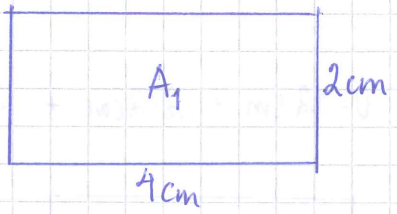
$= 8\,cm + 6\,cm = \underline{\underline{14\,cm}}$

Grön kurs

REKTANGELNS AREA

s.44

9

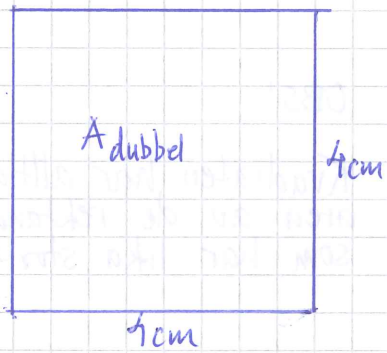


$A = b \cdot h = 4cm \cdot 2cm = 8\ cm^2$

a) Dubbel så stor area

$A_{dubbel} = 2 \cdot A_1 = 2 \cdot 8\ cm^2 = 16\ cm^2$

Sidlängderna kan vara $16\ cm^2 = 1 \cdot 16$
$= 2 \cdot 8$
$= 4 \cdot 4$ och oändligt många andra alternativ

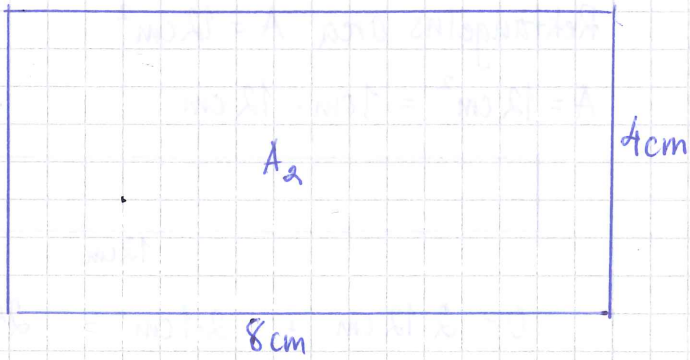


b) Fördubblar sidlängderna

$2 \cdot 4cm = 8cm$
$2 \cdot 2cm = 4cm$

$A_1 = 8\ cm^2$ (original)

$A_2 = b \cdot h = 8cm \cdot 4cm$
$= 32\ cm^2$



Kvoten $\frac{A_2}{A_1} = \frac{32\ cm^2}{8\ cm^2} = 4$

Svar: 4 gånger större area när sidlängderna fördubblats