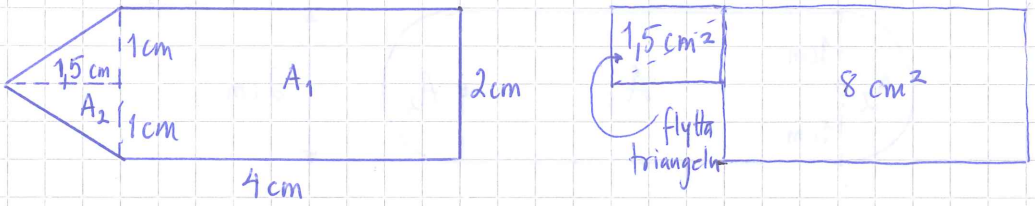
Blå kurs SAMMANSATTA FIGURER

s.63

18 a)



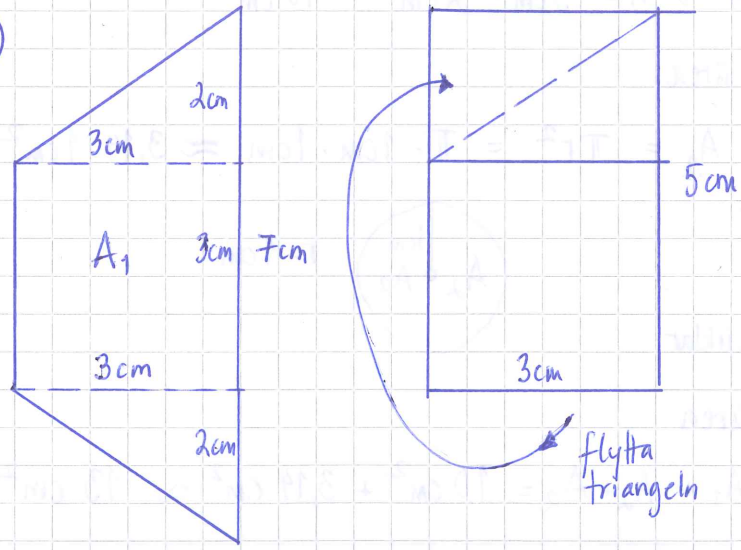
Figuren består av
- en rektangel med arean A_1
- två trianglar med arean A_2

Rektangel $A_1 = 4\,cm \cdot 2\,cm = 8\,cm^2$

Trianglar $2 \cdot A_2 = 2 \cdot \frac{b \cdot h}{2} = 2 \cdot \frac{1{,}5\,cm \cdot 1\,cm}{2} = \frac{\cancel{2} \cdot 1{,}5\,cm \cdot 1\,cm}{\cancel{2}} = 1{,}5\,cm^2$

Figurens area $A = A_1 + 2 \cdot A_2 = 8\,cm^2 + 1{,}5\,cm^2 = 9{,}5\,cm^2$

b)



Figuren består av
- en rektangel med arean A_1
- två trianglar med arean A_2

Rektangel $A_1 = b \cdot h = 3\,cm \cdot 3\,cm = 9\,cm^2$

Trianglar $2 \cdot A_2 = 2 \cdot \frac{b \cdot h}{2} = 2 \cdot \frac{3\,cm \cdot \cancel{2}\,cm}{\cancel{2}} = 6\,cm^2$

Figurens area $A = A_1 + 2 \cdot A_2 = 9\,cm^2 + 6\,cm^2 = 15\,cm^2$

alternativ:

$A = b \cdot h = 3\,cm \cdot 5\,cm = 15\,cm^2$

Blå kurs

s. 63

SAMMANSATTA FIGURER

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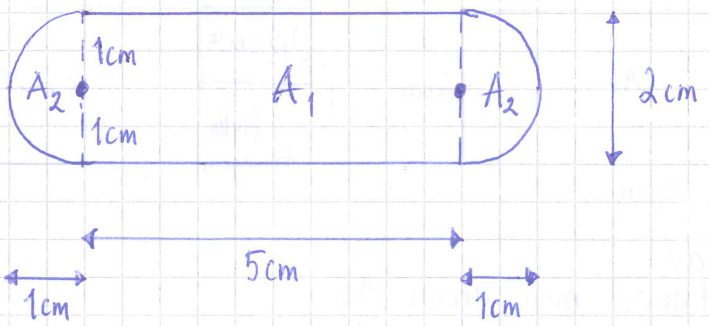


a) Figuren består av
- en rektangel
- två halvcirklar som tillsammans bildar en hel cirkel

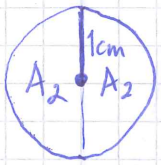
b) Rektangelns area

$A_1 = b \cdot h = 5\,cm \cdot 2\,cm = 10\,cm^2$

Cirkelns area

$A_2 + A_2 = \pi r^2 = \pi \cdot 1\,cm \cdot 1\,cm \approx 3{,}14 \cdot 1\,cm^2 = 3{,}14\,cm^2$

två halvcirklar



$r = 1\,cm$

Figurens area

$A = A_1 + A_2 + A_2 = 10\,cm^2 + 3{,}14\,cm^2 \approx 13\,cm^2$

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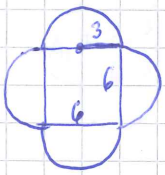
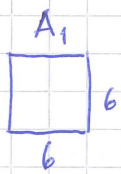
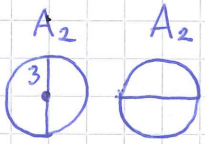
a)

a)





kvadrat



$r = 3\,cm$

två cirklar

A = en kvadrat + 2 cirklar

$= A_1 + 2 \cdot A_2$

$= b \cdot h + 2 \cdot \pi \cdot r \cdot r$

$= 6\,cm \cdot 6\,cm + 2 \cdot \pi \cdot 3\,cm \cdot 3\,cm$

$= 36\,cm^2 + 2 \cdot 3{,}14 \cdot 9\,cm^2$

$\approx 36\,cm^2 + 57\,cm^2$

$= \underline{93\,cm^2}$

Svar: $93\,cm^2$

Blå kurs

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SAMMANSATTA FIGURER

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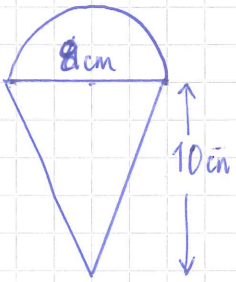
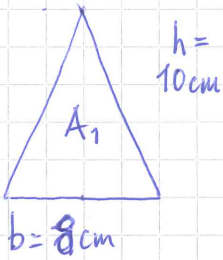
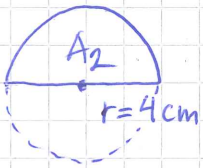
b)





Triangelns area A_1

$$A_1 = \frac{b \cdot h}{2} = \frac{8\,cm \cdot 10\,cm}{2} = 40\,cm^2$$



Halvcirkelns area A_2
är hälften av en hel cirkel

$$A_2 = \frac{\pi \cdot r \cdot r}{2} = \frac{3{,}14 \cdot 4\,cm \cdot 4\,cm}{2}$$

$$= \frac{3{,}14 \cdot 16\,cm^2}{2}$$

$$= 3{,}14 \cdot 8\,cm^2$$

$$\approx 25\,cm^2$$

Figurens area A

$$A = A_1 + A_2 = 40\,cm^2 + 25\,cm^2 = 65\,cm^2$$