

Randi Løchsen · Jan Erik Gulbrandsen · Arve Melhus

nye MEGA 9A

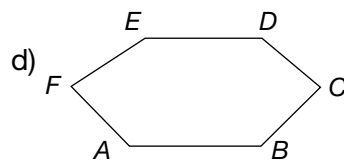
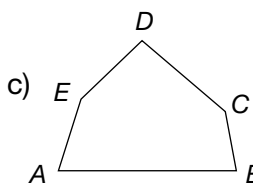
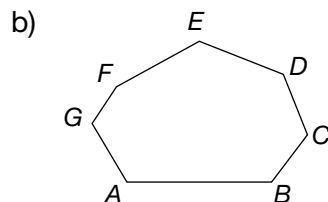
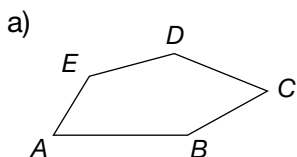
Matematikk for ungdomstrinnet

Fasit

Engangsbok 9A

FASIT TIL KAPITTEL A GEOMETRI

A 1



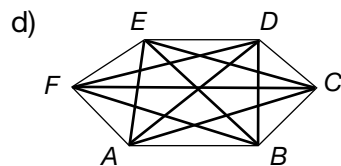
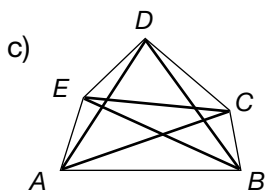
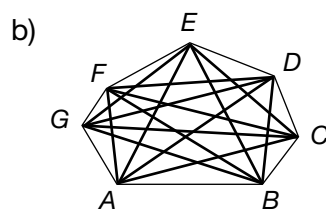
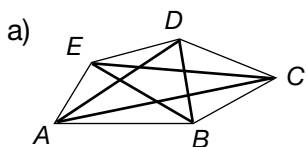
a) = 5

b) = 7

c) = 5

d) = 6

A 2

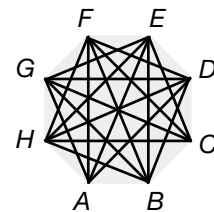
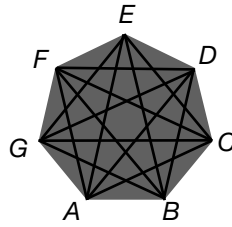
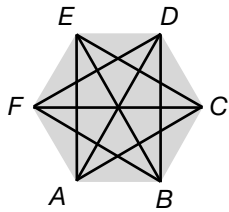
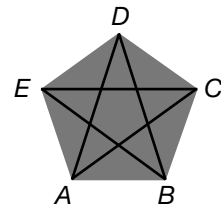
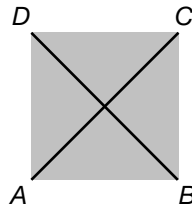
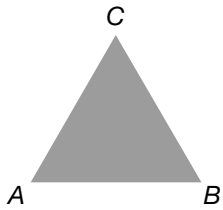


a) = 5

b) = 14

c) = 5

d) = 9

A 3**A 4**

a) $O = 6 \text{ cm} + 7 \text{ cm} + 6 \text{ cm} + 4 \text{ cm} = 23 \text{ cm}$

b) $O = AB + BC + CD + DE + EA$

$O = 7 \text{ cm} + 4 \text{ cm} + 6 \text{ cm} + 3 \text{ cm} + 6 \text{ cm} = 26 \text{ cm}$

A 5

5 cm

$O = 20 \text{ cm}$

A 6

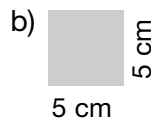
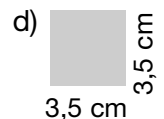
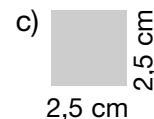
a) 16 cm

b) 28 cm

c) 48 cm

d) 10 cm

e) 13 cm

A 7**A 8****A 9**

Bredden: 3 cm

Lengden: 7 cm

$O = AB + BC + CD + DA + 7 \text{ cm} + 3 \text{ cm} + 7 \text{ cm} + 3 \text{ cm} = 20 \text{ cm}$

A 10

a) $2 \text{ cm} \cdot 5 \text{ cm} = 10 \text{ cm}$
 $2 \text{ cm} \cdot 8 \text{ cm} = 16 \text{ cm}$

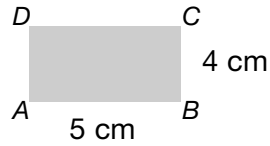
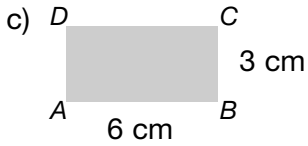
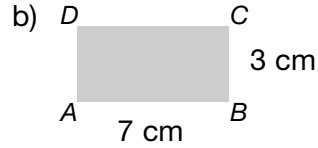
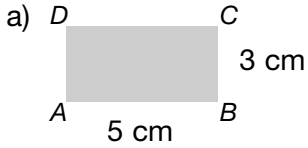
$O = 10 \text{ cm} + 16 \text{ cm} = 26 \text{ cm}$

b) $2 \text{ cm} \cdot 3 \text{ cm} = 6 \text{ cm}$
 $2 \text{ cm} \cdot 12 \text{ cm} = 24 \text{ cm}$

$O = 6 \text{ cm} + 24 \text{ cm} = 30 \text{ cm}$

c) $2 \text{ cm} \cdot 4,5 \text{ cm} = 9 \text{ cm}$
 $2 \text{ cm} \cdot 11 \text{ cm} = 22 \text{ cm}$

$O = 9 \text{ cm} + 22 \text{ cm} = 31 \text{ cm}$

A 11**A 12**

$$AB = CD = 8 \text{ cm}, BC = DA = 5 \text{ cm}$$

$$AB \parallel CD, BC \parallel DA$$

$$\angle DAB = \angle BCD, \angle ABC = \angle CDA$$

$$AB + BC + CD + DA = 8 \text{ cm} + 5 \text{ cm} + 8 \text{ cm} + 5 \text{ cm} = 26 \text{ cm}$$

A 13

$$\text{a) } 2 \text{ cm} \cdot 8 \text{ cm} = 16 \text{ cm}$$

$$2 \text{ cm} \cdot 6 \text{ cm} = 12 \text{ cm}$$

$$\bigcirc = 16 \text{ cm} + 12 \text{ cm} = 28 \text{ cm}$$

$$\text{b) } 2 \text{ cm} \cdot 11,5 \text{ cm} = 23 \text{ cm}$$

$$2 \text{ cm} \cdot 4,5 \text{ cm} = 9 \text{ cm}$$

$$\bigcirc = 23 \text{ cm} + 9 \text{ cm} = 32 \text{ cm}$$

A 14

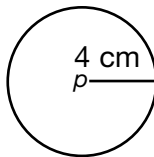
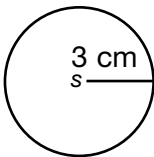
$$AB = BC = CD = 5 \text{ cm}$$

$$DE = 3,3 \text{ cm}$$

$$AB \parallel CD, BC \parallel DA$$

$$\angle DAB = \angle BCD, \angle ABC = \angle CDA$$

$$AB + BC + CD + DA = 5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} = 20 \text{ cm}$$

A 15

$$\text{a) } 6 \text{ cm}$$

$$\text{b) } 8 \text{ cm}$$

$\pi \pi$

A 16

$$\text{a) } 3,14 \cdot 3 \text{ cm} = 9,42 \text{ cm}$$

$$\text{b) } 3,14 \cdot 5 \text{ cm} = 15,7 \text{ cm}$$

$$\text{c) } 3,14 \cdot 8 \text{ cm} = 25,12 \text{ cm}$$

$$\text{d) } 3,14 \cdot 11 \text{ cm} = 34,54 \text{ cm}$$

$$\text{e) } 3,14 \cdot 6 \text{ cm} = 18,84 \text{ cm}$$

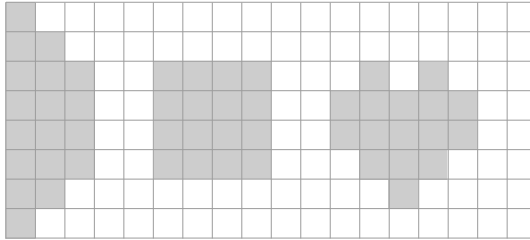
$$\text{a) } 3,14 \cdot 4,5 \text{ cm} = 14,13 \text{ cm}$$

A 17

20 cm^2

20 cm^2

20 cm^2

A 18**A 19**

16 cm^2

18 cm^2

18 cm^2

A 20

$9 \text{ cm} \cdot 6 \text{ cm} = 54 \text{ cm}^2$

Blå: 21 cm^2

Gul: 12 cm^2

Rød: 21 cm^2

A 21

–

Side 26

a) 32

b) 32 cm^2

c) $A = l \cdot b$

$A = 8 \text{ cm} \cdot 4 \text{ cm} = 32 \text{ cm}^2$

A 22

a) $A = l \cdot b$

$A = 10 \text{ cm} \cdot 5 \text{ cm} = 50 \text{ cm}^2$

b) $A = l \cdot b$

$A = 9 \text{ cm} \cdot 6 \text{ cm} = 54 \text{ cm}^2$

c) $A = l \cdot b$

$A = 11 \text{ cm} \cdot 4 \text{ cm} = 44 \text{ cm}^2$

d) $A = l \cdot b$

$A = 12 \text{ cm} \cdot 8 \text{ cm} = 96 \text{ cm}^2$

e) $A = l \cdot b$

$A = 4,5 \text{ cm} \cdot 2 \text{ cm} = 9 \text{ cm}^2$

A 23

a) $A = l \cdot b$

$A = 5 \text{ cm} \cdot 5 \text{ cm} = 25 \text{ cm}^2$

b) $A = l \cdot b$

$A = 10 \text{ cm} \cdot 10 \text{ cm} = 100 \text{ cm}^2$

c) $A = l \cdot b$

$A = 8 \text{ cm} \cdot 8 \text{ cm} = 64 \text{ cm}^2$

d) $A = l \cdot b$

$A = 2 \text{ cm} \cdot 2 \text{ cm} = 4 \text{ cm}^2$

e) $A = l \cdot b$

$A = 10 \text{ cm} \cdot 10 \text{ cm} = 100 \text{ cm}^2$

f) $A = l \cdot b$

$A = 4,5 \text{ cm} \cdot 4,5 \text{ cm} = 20,25 \text{ cm}^2$

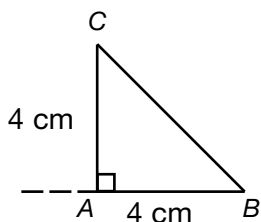
g) $A = l \cdot b$

$A = 12,2 \text{ cm} \cdot 12,2 \text{ cm} = 148,84 \text{ cm}^2$

Arealet av trekanter side 29

- a) 36 cm^2 b) 18 cm^2 c) $36 / 18$ d) ??

A 24



8 cm^2

$$A = l \cdot b = 4 \text{ cm} \cdot 4 \text{ cm} = 16 \text{ cm}^2$$

$$\text{Halve kvadratet } \frac{16^2}{2} = 8 \text{ cm}^2$$

A 25

$$\text{a) } A = \frac{g \cdot h}{2} = \frac{5 \text{ cm} \cdot 8 \text{ cm}}{2} = \frac{40 \text{ cm}^2}{2} = \underline{\underline{20 \text{ cm}^2}}$$

$$\text{b) } A = \frac{g \cdot h}{2} = \frac{4 \text{ cm} \cdot 6 \text{ cm}}{2} = \frac{24 \text{ cm}^2}{2} = \underline{\underline{12 \text{ cm}^2}}$$

$$\text{c) } A = \frac{g \cdot h}{2} = \frac{5 \text{ cm} \cdot 4 \text{ cm}}{2} = \frac{60 \text{ cm}^2}{2} = \underline{\underline{30 \text{ cm}^2}}$$

$$\text{d) } A = \frac{g \cdot h}{2} = \frac{9 \text{ cm} \cdot 6 \text{ cm}}{2} = \frac{54 \text{ cm}^2}{2} = \underline{\underline{27 \text{ cm}^2}}$$

$$\text{e) } A = \frac{g \cdot h}{2} = \frac{6 \text{ cm} \cdot 5 \text{ cm}}{2} = \frac{30 \text{ cm}^2}{2} = \underline{\underline{15 \text{ cm}^2}}$$

$$\text{f) } A = \frac{g \cdot h}{2} = \frac{7 \text{ cm} \cdot 5 \text{ cm}}{2} = \frac{35 \text{ cm}^2}{2} = \underline{\underline{17,5 \text{ cm}^2}}$$

A 26

$$\begin{aligned} \text{a) } A &= \pi \cdot r \cdot r \\ A &= 3,14 \cdot 4 \text{ cm} \cdot 4 \text{ cm} \\ A &= \underline{\underline{50,24 \text{ cm}^2}} \end{aligned}$$

$$\begin{aligned} \text{b) } A &= \pi \cdot r^2 \\ A &= 3,14 \cdot 8 \text{ cm} \cdot 8 \text{ cm} \\ A &= \underline{\underline{200,96 \text{ cm}^2}} \end{aligned}$$

$$\begin{aligned} \text{c) } A &= \pi \cdot r \cdot r \\ A &= 3,14 \cdot 10 \text{ cm} \cdot 10 \text{ cm} \\ A &= \underline{\underline{314 \text{ cm}^2}} \end{aligned}$$

$$\begin{aligned} \text{d) } A &= \pi \cdot r^2 \\ A &= 3,14 \cdot 22 \text{ cm} \cdot 22 \text{ cm} \\ A &= \underline{\underline{1519,76 \text{ cm}^2}} \end{aligned}$$

A 27

- a) 12 dl b) 2,3 l c) 8 dl d) 0,3 l
e) 5 dl f) 15 l g) 43 dl h) 0,25 l

Tenk og snakk – øverst

- a) 1 cm^3 b) 100 terninger
c) $10 \cdot 10 \cdot 10 = 1000$ d) 1000 cm^3

Tenk og snakk – nederst

a) $5 \cdot 4 \cdot 3 = 60$ terninger

b) 60 cm^3

c) $A = l \cdot b \cdot h$

$V = \text{lengde} \cdot \text{bredde} \cdot \text{høyde}$

A 28

a) 1) $V = s \cdot s \cdot s$
 $V = 3 \text{ cm} \cdot 3 \text{ cm} \cdot 3 \text{ cm}$
 $V = 27 \text{ cm}^3$

b) 1) 27 terninger

2) $V = l \cdot b \cdot h$
 $V = 5 \text{ cm} \cdot 4 \text{ cm} \cdot 3 \text{ cm}$
 $V = 60 \text{ cm}^3$

2) 60 terninger

3) $V = s \cdot s \cdot s$
 $V = 5 \text{ cm} \cdot 5 \text{ cm} \cdot 5 \text{ cm}$
 $V = 125 \text{ cm}^3$

3) 125 terninger

A 29

a) $V = s \cdot s \cdot s$
 $V = 2 \text{ cm} \cdot 2 \text{ cm} \cdot 2 \text{ cm}$
 $V = 8 \text{ cm}^3$

b) $V = l \cdot h \cdot b$
 $V = 8 \text{ cm} \cdot 5 \text{ cm} \cdot 4 \text{ cm}$
 $V = 160 \text{ cm}^3$

c) $V = s \cdot s \cdot s$
 $V = 10 \text{ cm} \cdot 10 \text{ cm} \cdot 10 \text{ cm}$
 $V = 1000 \text{ cm}^3$

d) $V = l \cdot b \cdot h$
 $V = 6 \text{ cm} \cdot 3 \text{ cm} \cdot 2 \text{ cm}$
 $V = 36 \text{ cm}^3$

e) $V = l \cdot b \cdot h$
 $V = 3 \text{ cm} \cdot 2 \text{ cm} \cdot 1 \text{ cm}$
 $V = 6 \text{ cm}^3$

f) $V = l \cdot b \cdot h$
 $V = 4,5 \text{ cm} \cdot 2 \text{ cm} \cdot 2 \text{ cm}$
 $V = 18 \text{ cm}^3$

g) $V = l \cdot b \cdot h$
 $V = 1 \text{ dm} \cdot 2 \text{ dm} \cdot 5 \text{ dm}$
 $V = 10 \text{ dm}^3$

h) $V = l \cdot b \cdot h$
 $V = 4 \text{ dm} \cdot 3 \text{ dm} \cdot 2 \text{ dm}$
 $V = 24 \text{ dm}^3$

i) $V = l \cdot b \cdot h$
 $V = 0,5 \text{ dm} \cdot 1 \text{ dm} \cdot 4 \text{ dm}$
 $V = 2 \text{ dm}^3$

A 30

a) $V = \pi \cdot r \cdot r \cdot h$
 $V = 3,14 \cdot 2 \text{ cm} \cdot 2 \text{ cm} \cdot 5 \text{ cm}$
 $V = 62,8 \text{ cm}^3$

b) $V = \pi \cdot r^2 \cdot h$
 $V = 3,14 \cdot 5 \text{ cm} \cdot 5 \text{ cm} \cdot 6 \text{ cm}$
 $V = 471 \text{ cm}^3$

c) $V = \pi \cdot r \cdot r \cdot h$
 $V = 3,14 \cdot 6 \text{ cm} \cdot 6 \text{ cm} \cdot 5 \text{ cm}$
 $V = 565,2 \text{ cm}^3$

A 31

g) $V = \pi \cdot r \cdot r \cdot h$
 $V = 3,14 \cdot 2 \text{ cm} \cdot 2 \text{ cm} \cdot 10 \text{ cm}$
 $V = 125,6 \text{ cm}^3$

b) $V = \pi \cdot r^2 \cdot h$
 $V = 3,14 \cdot 5 \text{ cm} \cdot 5 \text{ cm} \cdot 8 \text{ cm}$
 $V = 628 \text{ cm}^3$

c) $V = \pi \cdot r \cdot r \cdot h$
 $V = 3,14 \cdot 6 \text{ cm} \cdot 6 \text{ cm} \cdot 9 \text{ cm}$
 $V = 1017,36 \text{ cm}^3$

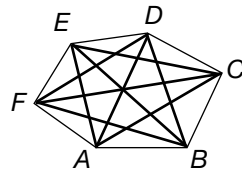
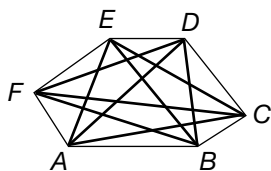
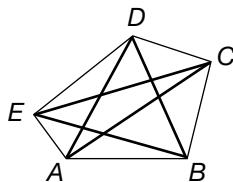
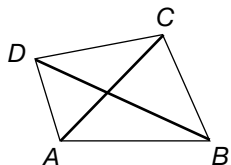
d) $V = \pi \cdot r \cdot r \cdot h$
 $V = 3,14 \cdot 1 \text{ dm} \cdot 1 \text{ dm} \cdot 4 \text{ dm}$
 $V = 12,56 \text{ dm}^3$

e) $V = \pi \cdot r^2 \cdot h$
 $V = 3,14 \cdot 4 \text{ dm} \cdot 4 \text{ dm} \cdot 5 \text{ dm}$
 $V = 251,2 \text{ dm}^3$

f) $V = \pi \cdot r \cdot r \cdot h$
 $V = 3,14 \cdot 0,4 \text{ dm} \cdot 0,4 \text{ dm} \cdot 2 \text{ cm}$
 $V = 1,0048 \text{ dm}^3$

Sylinder d) 12,56 liter e) 251,2 liter f) 1,0048 \approx 1 liter

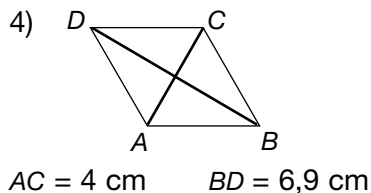
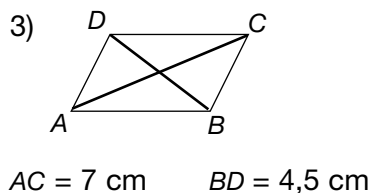
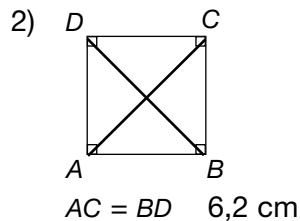
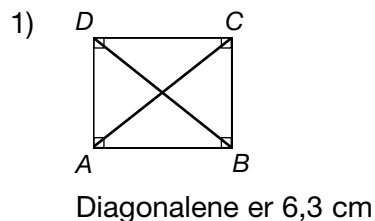
A 32



a) Firkant 4 4 2
 c) Sekskant 6 6 9

b) Femkant 5 5 5
 d) Sekskant 6 6 9

A 33



a) 1 og 2 b) 3 og 4 c) 3 er et parallelogram. 4 er en rombe.

A 34

a) Sirkel

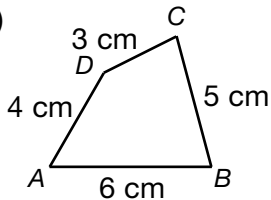
b) Regulær sekskant

c) Regulær åttekant

b og c

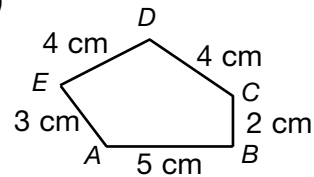
A 35

a)



$$\begin{aligned} \text{a) } O &= AB + BC + CD + DA \\ O &= 6 \text{ cm} + 5 \text{ cm} + 3 \text{ cm} + 4 \text{ cm} \\ O &= \underline{\underline{18 \text{ cm}}} \end{aligned}$$

b)



$$\begin{aligned} \text{b) } O &= AB + BC + CD + DE + ED \\ O &= 5 \text{ cm} + 2 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} + 3 \text{ cm} \\ O &= \underline{\underline{18 \text{ cm}}} \end{aligned}$$

A 36

$$\begin{aligned} \text{a) } O &= 2 \cdot l + 2 \cdot b \\ O &= 2 \cdot 3 \text{ cm} + 2 \cdot 3 \text{ cm} \\ O &= 6 \text{ cm} + 6 \text{ cm} \\ O &= \underline{\underline{12 \text{ cm}}} \end{aligned}$$

$$\begin{aligned} \text{b) } O &= 4 \cdot s \\ O &= 4 \cdot 8 \text{ cm} \\ O &= \underline{\underline{32 \text{ cm}}} \end{aligned}$$

$$\begin{aligned} \text{c) } O &= 4 \cdot s \\ O &= 4 \cdot 10 \text{ cm} \\ O &= \underline{\underline{40 \text{ cm}}} \end{aligned}$$

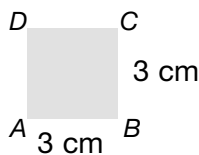
$$\begin{aligned} \text{d) } O &= 2 \cdot l + 2b \\ O &= 2 \cdot 2,5 \text{ cm} + 2 \cdot 2,5 \text{ cm} \\ O &= 5 \text{ cm} + 5 \text{ cm} \\ O &= \underline{\underline{10 \text{ cm}}} \end{aligned}$$

$$\begin{aligned} \text{e) } O &= 4 \cdot s \\ O &= 4 \cdot 3,3 \text{ cm} \\ O &= \underline{\underline{13,2 \text{ cm}}} \end{aligned}$$

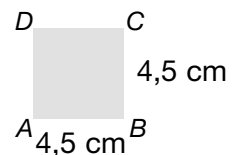
$$\begin{aligned} \text{f) } O &= 4 \cdot s \\ O &= 4 \cdot 20 \text{ cm} \\ O &= \underline{\underline{80 \text{ cm}}} \end{aligned}$$

A 37

$$\text{a) } 12 : 4 = 3$$



$$\text{b) } 18 : 4 = 4,5$$



A 38

$$\begin{aligned} \text{a) } O &= 2 \cdot l + 2 \cdot b \\ O &= 2 \cdot 8 \text{ cm} + 2 \cdot 5 \text{ cm} \\ O &= 16 \text{ cm} + 10 \text{ cm} \\ O &= \underline{\underline{26 \text{ cm}}} \end{aligned}$$

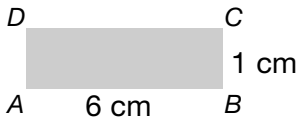
$$\begin{aligned} \text{b) } O &= 2 \cdot l + 2 \cdot b \\ O &= 2 \cdot 12 \text{ cm} + 2 \cdot 3 \text{ cm} \\ O &= 24 \text{ cm} + 6 \text{ cm} \\ O &= \underline{\underline{30 \text{ cm}}} \end{aligned}$$

$$\begin{aligned} \text{c) } O &= 2 \cdot b + 2 \cdot l \\ O &= 2 \cdot 4,5 \text{ cm} + 2 \cdot 11 \text{ cm} \\ O &= 9 \text{ cm} + 22 \text{ cm} \\ O &= \underline{\underline{31 \text{ cm}}} \end{aligned}$$

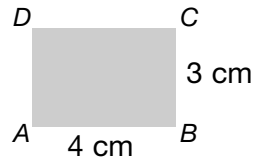
$$\begin{aligned} \text{d) } O &= 2 \cdot b + 2 \cdot l \\ O &= 2 \cdot 8 \text{ cm} + 2 \cdot 12 \text{ cm} \\ O &= 16 \text{ cm} + 24 \text{ cm} \\ O &= \underline{\underline{40 \text{ cm}}} \end{aligned}$$

A 39

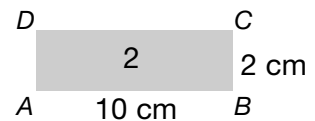
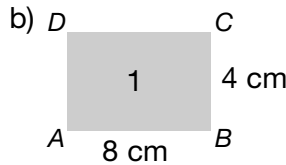
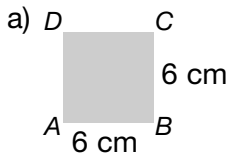
a) $O = 2 \cdot l + 2 \cdot b$
 $O = 2 \cdot 6 \text{ cm} + 2 \cdot 1 \text{ cm}$
 $O = 12 \text{ cm} + 2 \text{ cm}$
 $O = \underline{\underline{14 \text{ cm}}}$



b) $O = 2 \cdot l + 2 \cdot b$
 $O = 2 \cdot 4 \text{ cm} + 2 \cdot 3 \text{ cm}$
 $O = 8 \text{ cm} + 6 \text{ cm}$
 $O = \underline{\underline{14 \text{ cm}}}$



A 40



c) 6 cm

d) Lengde 8 cm, bredde 4 cm
 Lengde 10 cm, bredde 2 cm

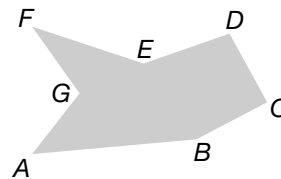
A 41

a) $O = AB + BC + CD + DE + EF + FG + GA$
 $O = 70 \text{ m} + 35 \text{ m} + 35 \text{ m} + 60 \text{ m} + 40 \text{ m} + 25 \text{ m} + 20 \text{ m}$
 $O = \underline{\underline{285 \text{ meter gjerde}}}$

b) Alt 1.
 $O = 300 \text{ m}$
 $\quad - 285 \text{ m}$
 $\quad \quad \underline{\underline{15 \text{ m}}}$

Alt 2.
 $O = 300 \text{ m} - 285 \text{ m} = \underline{\underline{15 \text{ m}}}$

c) 285 stolper

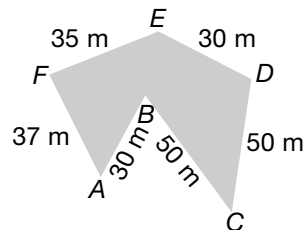


A 42

Forslag:

a) $O = AB + BC + CD + DE + EF + FA$
 $O = 30 \text{ m} + 50 \text{ m} + 50 \text{ m} + 30 \text{ m} + 35 \text{ m} + 37 \text{ m}$
 $O = \underline{\underline{232 \text{ meter gjerde}}}$

c) 232 stolper



A 43

3,14

Omkretsen av en geometrisk figur

Diameter

A 44

$$\begin{aligned} \text{a) } O &= \pi \cdot d \\ O &= 3,14 \cdot 4 \text{ cm} \\ O &= 12,56 \text{ cm} \end{aligned}$$

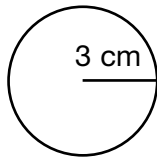
$$\begin{aligned} \text{b) } O &= \pi \cdot d \\ O &= 3,14 \cdot 7 \text{ cm} \\ O &= 21,98 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{c) } O &= \pi \cdot d \\ O &= 3,14 \cdot 9 \text{ cm} \\ O &= 28,26 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{d) } O &= \pi \cdot d \\ O &= 3,14 \cdot 22 \text{ cm} \\ O &= 69,08 \text{ cm} \end{aligned}$$

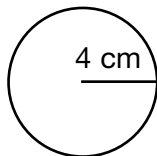
$$\begin{aligned} \text{e) } O &= \pi \cdot d \\ O &= 3,14 \cdot 5 \text{ cm} \\ O &= 15,7 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{f) } O &= \pi \cdot d \\ O &= 3,14 \cdot 8,5 \text{ cm} \\ O &= 26,69 \text{ cm} \end{aligned}$$

A 45

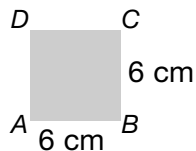
a) 6 cm

$$\begin{aligned} \text{b) } O &= \pi \cdot d \\ O &= 3,14 \cdot 6 \text{ cm} \\ O &= \underline{\underline{18,84 \text{ cm}}} \end{aligned}$$

A 46

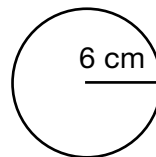
a) 8 cm

$$\begin{aligned} \text{b) } O &= \pi \cdot d \\ O &= 3,14 \cdot 8 \text{ cm} \\ O &= \underline{\underline{25,12 \text{ cm}}} \end{aligned}$$

A 47

$$\begin{aligned} O &= 4 \cdot s \\ O &= 4 \cdot 6 \text{ cm} \\ O &= \underline{\underline{24 \text{ cm}}} \end{aligned}$$

Kvadratet



$$\begin{aligned} O &= \pi \cdot d \\ O &= 3,14 \cdot 6 \text{ cm} \\ O &= \underline{\underline{18,84 \text{ cm}}} \end{aligned}$$

$$24 \text{ cm} - 18,84 = \underline{\underline{5,16 \text{ cm}}}$$

A 48

Rød : 16 cm²
Rød er størst.

Blå: 14 cm²
Gul er minst.

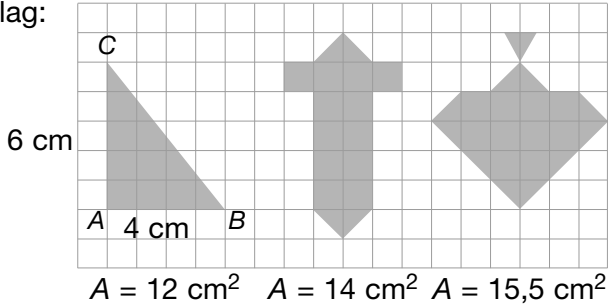
Gul: 10 cm²Grønn: 11,5 cm²**A 49**

Rød: 14 cm²
Rosa: 4 cm²

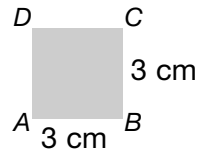
Blå: 14 cm²Gul: 12 cm²Grønn: 16 cm²

A 50

Forslag:

**A 51**

-

A 52

a) 9 ruter

b) 9 cm²

A 53

a) $A = l \cdot b$
 $A = 4 \text{ cm} \cdot 4 \text{ cm}$
 $A = \underline{\underline{16 \text{ cm}^2}}$

b) $A = l \cdot b$
 $A = 5 \text{ cm} \cdot 5 \text{ cm} = 5^2$
 $A = \underline{\underline{25 \text{ cm}^2}}$

c) $A = s \cdot s = s^2$
 $A = 2,5^2$
 $A = \underline{\underline{6,25 \text{ cm}^2}}$

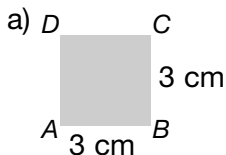
A 54

a) $A = s \cdot s = s^2$
 $A = 6^2$
 $A = \underline{\underline{36 \text{ cm}^2}}$

b) $A = l \cdot b$
 $A = 10 \text{ cm} \cdot 10 \text{ cm}$
 $A = \underline{\underline{100 \text{ cm}^2}}$

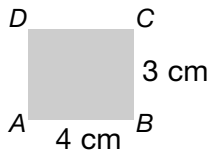
c) $A = s \cdot s$
 $A = 8 \text{ dm} \cdot 8 \text{ dm}$
 $A = \underline{\underline{64 \text{ dm}^2}}$

d) $A = s \cdot s$
 $A = 5 \text{ m} \cdot 5 \text{ m}$
 $A = \underline{\underline{25 \text{ m}^2}}$

A 55

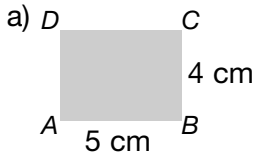
b) $A = l \cdot b$
 $A = 3 \text{ cm} \cdot 3 \text{ cm}$
 $A = \underline{\underline{9 \text{ cm}^2}}$

c) 12 stolper

A 56

a) 12 kvadrat

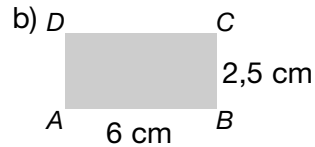
b) $A = \underline{\underline{12 \text{ cm}^2}}$

A 57

$$A = l \cdot b$$

$$A = 5 \text{ cm} \cdot 4 \text{ cm}$$

$$A = \underline{\underline{20 \text{ cm}^2}}$$



$$A = l \cdot b$$

$$A = 6 \text{ cm} \cdot 2,5 \text{ cm}$$

$$A = \underline{\underline{15 \text{ cm}^2}}$$

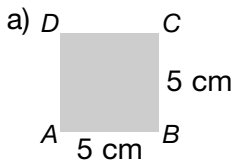
A 58

a) $A = l \cdot b$
 $A = 6 \text{ cm} \cdot 5 \text{ cm}$
 $A = \underline{\underline{30 \text{ cm}^2}}$

b) $A = l \cdot b$
 $A = 9 \text{ cm} \cdot 4 \text{ cm}$
 $A = \underline{\underline{36 \text{ cm}^2}}$

c) $A = l \cdot b$
 $A = 7 \text{ dm} \cdot 3 \text{ dm}$
 $A = \underline{\underline{21 \text{ dm}^2}}$

d) $A = 10 \text{ m} \cdot 12 \text{ m}$
 $A = \underline{\underline{120 \text{ m}^2}}$

A 59

$$A = l \cdot b$$

$$A = 5 \text{ cm} \cdot 5 \text{ cm}$$

$$A = \underline{\underline{25 \text{ cm}^2}}$$



$$A = l \cdot b$$

$$A = 8 \text{ cm} \cdot 2 \text{ cm}$$

$$A = \underline{\underline{16 \text{ cm}^2}}$$

A 60

a) $A = \underline{\underline{8 \text{ cm}^2}}$

b) $A = \underline{\underline{9 \text{ cm}^2}}$

c) $A = \underline{\underline{4,5 \text{ cm}^2}}$

d) $A = \underline{\underline{12 \text{ cm}^2}}$

A 61

a) 1) Rektangel $A = l \cdot b$
 $A = 6 \text{ cm} \cdot 4 \text{ cm}$
 $A = \underline{\underline{24 \text{ cm}^2}}$

a) Trekant $A = \frac{g \cdot h}{2}$
 $A = \frac{6 \text{ cm} \cdot 4 \text{ cm}}{2}$
 $A = \underline{\underline{12 \text{ cm}^2}}$

2) Rektangel $A = l \cdot b$
 $A = 6 \text{ cm} \cdot 4 \text{ cm}$
 $A = \underline{\underline{24 \text{ cm}^2}}$

a) Trekant $A = \frac{g \cdot h}{2}$
 $A = \frac{6 \text{ cm} \cdot 4 \text{ cm}}{2}$
 $A = \underline{\underline{12 \text{ cm}^2}}$

b) De to markerte trekantene har ulik form men likt areal.

A 62

a) $A = \frac{g \cdot h}{2}$
 $A = \frac{10 \text{ cm} \cdot 5 \text{ cm}}{2}$
 $A = \underline{\underline{25 \text{ cm}^2}}$

b) $A = \frac{g \cdot h}{2}$
 $A = \frac{6 \text{ cm} \cdot 7 \text{ cm}}{2}$
 $A = \underline{\underline{21 \text{ cm}^2}}$

c) $A = \frac{g \cdot h}{2}$
 $A = \frac{8 \text{ dm} \cdot 5 \text{ dm}}{2}$
 $A = \underline{\underline{20 \text{ dm}^2}}$

d) $A = \frac{g \cdot h}{2}$
 $A = \frac{4,5 \text{ m} \cdot 4 \text{ m}}{2}$
 $A = \underline{\underline{9 \text{ m}^2}}$

A 63

a) $A = \frac{g \cdot h}{2}$
 $A = \frac{7 \text{ cm} \cdot 10 \text{ cm}}{2}$
 $A = \underline{\underline{35 \text{ cm}^2}}$

b) $A = \frac{g \cdot h}{2}$
 $A = \frac{8 \text{ dm} \cdot 6 \text{ dm}}{2}$
 $A = \underline{\underline{24 \text{ dm}^2}}$

c) $A = \frac{g \cdot h}{2}$
 $A = \frac{12 \text{ m} \cdot 7 \text{ m}}{2}$
 $A = \underline{\underline{42 \text{ m}^2}}$

A 64

a) $28,26 \text{ cm}^2$

b) 3 cm

c) 6 cm

d) $A = 28,26 \text{ cm}^2$

A 65

a) $A = \pi \cdot r \cdot r$
 $A = 3,14 \cdot 2 \text{ cm} \cdot 2 \text{ cm}$
 $A = \underline{\underline{12,56 \text{ cm}^2}}$

b) $A = \pi \cdot r^2$
 $A = 3,14 \cdot 3,5 \text{ cm} \cdot 3,5 \text{ cm}$
 $A = \underline{\underline{38,47 \text{ cm}^2}}$

d) $A = \pi \cdot r \cdot r$
 $A = 3,14 \cdot 1,4 \text{ cm} \cdot 1,4 \text{ cm}$
 $A = \underline{\underline{6,15 \text{ cm}^2}}$

A 66

a) 20 cm

b) 125,6 cm

c) 1256 cm²**A 67**

a) 1,2 m

b) $A = 1,13 \text{ m}^2$ c) $O = 3,77 \text{ m}$ **A 68**a) $5 \cdot 5 \cdot 5 = 5^3 = 125$ b) 125 cm²

c) Terning

A 69a) $V = l \cdot b \cdot h$ $V = 10 \text{ cm} \cdot 10 \text{ cm} \cdot 10 \text{ cm}$ $V = \underline{\underline{1000 \text{ cm}^3}}$ b) $V = s^3$ $V = 3 \text{ cm}^3$ $V = \underline{\underline{27 \text{ cm}^3}}$ c) $V = l \cdot b \cdot h$ $V = 5 \text{ cm} \cdot 5 \text{ cm} \cdot 5 \text{ cm}$ $V = \underline{\underline{125 \text{ cm}^3}}$ **A 70**a) $V = l \cdot b \cdot h$ $V = 6 \text{ cm} \cdot 3 \text{ cm} \cdot 10 \text{ cm}$ $V = \underline{\underline{180 \text{ cm}^3}}$ b) $V = l \cdot b \cdot h$ $V = 5 \text{ m} \cdot 3 \text{ m} \cdot 8 \text{ m}$ $V = \underline{\underline{120 \text{ m}^3}}$ **A 71**a) $V = l \cdot b \cdot h$ $V = 50 \text{ cm} \cdot 27 \text{ cm} \cdot 4 \text{ cm}$ $V = \underline{\underline{5400 \text{ cm}^3}}$ b) $V = l \cdot b \cdot h$ $V = 1,2 \text{ cm} \cdot 1,2 \text{ cm} \cdot 1,2 \text{ cm}$ $V = \underline{\underline{1,728 \text{ cm}^3}}$ **A 72**a) $V = l \cdot b \cdot h$ $V = 4 \text{ dm} \cdot 3 \text{ dm} \cdot 0,5 \text{ dm}$ $V = \underline{\underline{6 \text{ dm}^3}}$ b) $1 \text{ dm}^3 = 1 \text{ liter}$ $\underline{\underline{6 \text{ dm}^3 = 6 \text{ liter}}}$ c) $\underline{\underline{60 \text{ dl}}}$ **A 73**a) $V = l \cdot b \cdot h$ $V = 5 \text{ dm} \cdot 2 \text{ dm} \cdot 1 \text{ dm}$ $V = \underline{\underline{10 \text{ dm}^3}}$

b) 10 liter

A 75a) $A = \pi \cdot r \cdot r$ $A = 3,14 \cdot 5 \text{ cm} \cdot 5 \text{ cm}$ $A = \underline{\underline{78,5 \text{ cm}^2}}$ b) $A = \pi \cdot r^2$ $A = 3,14 \cdot 8 \text{ cm} \cdot 8 \text{ cm}$ $A = \underline{\underline{200,96 \text{ cm}^2}}$ **A 74**a) $V = l \cdot b \cdot h$ $V = 14 \text{ dm} \cdot 5 \text{ dm} \cdot 6 \text{ dm}$ $V = \underline{\underline{420 \text{ dm}^3}}$ b) $1 \text{ dm}^3 = 1 \text{ liter}$

Akvariet rommer 420 liter vann

c) $A = \pi \cdot r \cdot r$ $A = 3,14 \cdot 4 \text{ dm} \cdot 4 \text{ dm}$ $A = \underline{\underline{50,24 \text{ dm}^2}}$

A 76

$$\begin{aligned} \text{a) } A &= \pi \cdot r \cdot r \cdot h \\ A &= 3,14 \cdot 3 \text{ cm} \cdot 3 \text{ cm} \cdot 8 \text{ cm} \\ A &= \underline{\underline{226,08 \text{ cm}^3}} \end{aligned}$$

$$\begin{aligned} \text{b) } A &= \pi \cdot r^2 \cdot h \\ A &= 3,14 \cdot 5 \text{ cm} \cdot 5 \text{ cm} \cdot 12 \text{ cm} \\ A &= \underline{\underline{942 \text{ cm}^3}} \end{aligned}$$

$$\begin{aligned} \text{c) } A &= \pi \cdot r \cdot r \cdot h \\ A &= 3,14 \cdot 4 \text{ m} \cdot 4 \text{ m} \cdot 9 \text{ m} \\ A &= \underline{\underline{452,16 \text{ m}^3}} \end{aligned}$$

A 77

$$\begin{aligned} \text{a) } A &= \pi \cdot r \cdot r \cdot h \\ A &= 3,14 \cdot 0,4 \text{ dm} \cdot 0,4 \text{ dm} \cdot 3 \text{ dm} \\ A &= \underline{\underline{1,51 \text{ dm}^3}} \end{aligned}$$

Mugga rommer
omtrent 1,5 l.

$$\begin{aligned} \text{b) } A &= \pi \cdot r^2 \cdot h \\ A &= 3,14 \cdot 0,4 \text{ dm} \cdot 0,4 \text{ dm} \cdot 2 \text{ dm} \\ A &= \underline{\underline{1,005 \text{ dm}^3}} \end{aligned}$$

Mugga rommer
omtrent 1 liter saft.

A 78

$$\begin{aligned} \text{a) } A &= \pi \cdot r^2 \cdot h \\ A &= 3,14 \cdot 1 \text{ dm} \cdot 1 \text{ dm} \cdot 3,2 \text{ dm} \\ A &= \underline{\underline{10,048 \text{ dm}^3}} \end{aligned}$$

Omtrent 10 liter

b) 5 små sylindere

A 79

Familien Berg

$$\begin{aligned} O &= \pi \cdot d \\ O &= 3,14 \cdot 10 \text{ m} \\ O &= \underline{\underline{31,4 \text{ m}}} \\ A &= \pi \cdot r^2 \\ A &= 3,14 \cdot 5 \text{ m} \cdot 5 \text{ m} \\ A &= \underline{\underline{78,5 \text{ m}^2}} \end{aligned}$$

$$\begin{aligned} V &= \pi \cdot r \cdot r \cdot h \\ V &= 3,14 \cdot 5 \text{ m} \cdot 5 \text{ m} \cdot 1,2 \text{ m} \\ V &= \underline{\underline{94,2 \text{ m}^3}} \end{aligned}$$

Familien Morales

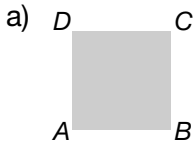
$$\begin{aligned} O &= 2 \cdot l + 2 \cdot b \\ O &= 2 \cdot 10 \text{ m} + 2 \cdot 10 \text{ m} \\ O &= 20 \text{ m} + 20 \text{ m} \\ O &= \underline{\underline{40 \text{ m}}} \end{aligned}$$

$$\begin{aligned} A &= l \cdot b \\ A &= 10 \text{ m} \cdot 10 \text{ m} \\ A &= \underline{\underline{100 \text{ m}^2}} \end{aligned}$$

$$\begin{aligned} V &= l \cdot b \\ V &= 10 \text{ m} \cdot 10 \text{ m} \cdot 1,2 \text{ m} \\ V &= \underline{\underline{120 \text{ m}^3}} \end{aligned}$$

PRØV DEG SELV/PRØV DEG SJØLV

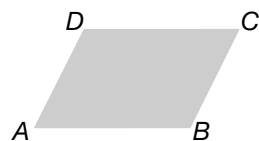
PA 1



b) Kvadrat

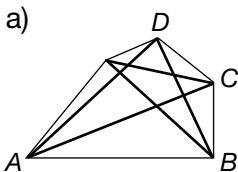


Rektangel

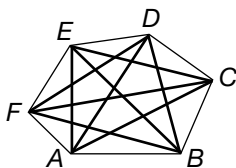


Parallelogram

PA 2



b) Femkant



Sekskant

PA 3

$$O = AB + BC + CD + DE + EA$$

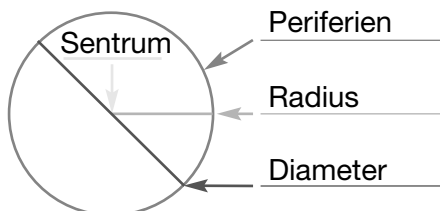
$$O = 5 \text{ cm} + 1 \text{ cm} + 4 \text{ cm} + 3 \text{ cm} + 2 \text{ cm}$$

$$O = 15 \text{ cm}$$

PA 4

1)	2)	3)
a) $O = 12 \text{ cm}$	$O = 16 \text{ cm}$	$O = 12 \text{ cm}$
b) $A = s^2$	$A = l \cdot b$	$A = \frac{g \cdot h}{2}$
$A = 3^2$	$A = 5 \text{ cm} \cdot 3 \text{ cm}$	$A = \frac{4 \text{ cm} \cdot 3 \text{ cm}}{2}$
$A = 9 \text{ cm}^2$	$A = 15 \text{ cm}^2$	$A = \underline{\underline{6 \text{ cm}^2}}$

PA 5



PA 6

a) $8 \text{ cm} = d$

b) $O = \pi \cdot d$
 $O = 3,14 \cdot 8 \text{ cm}$
 $O = \underline{\underline{25,12 \text{ cm}^2}}$

c) $A = \pi \cdot r \cdot r$
 $A = 3,14 \cdot 4 \text{ cm} \cdot 4 \text{ cm}$
 $A = \underline{\underline{50,24 \text{ cm}^2}}$

PA 7

a) 15 dl b) 1,2 l c) 3 dl d) 0,7 l e) 5 dl f) 15 g) 540 dl

PA 8

a) $V = l \cdot b \cdot h$
 $V = 4 \text{ dm} \cdot 2 \text{ dm} \cdot 8 \text{ dm}$
 $V = 64 \text{ dm}^3 = 64 \text{ liter}$

PA 9

a) $V = \pi \cdot r \cdot h$
 $V = 3,14 \cdot 2 \text{ dm} \cdot 2 \text{ dm} \cdot 5 \text{ dm}$
 $V = 62,8 \text{ dm}^3 = 62,8 \text{ liter}$

b) $62,8 \text{ liter} \approx 63 \text{ liter}$

PA 10

a) Esken

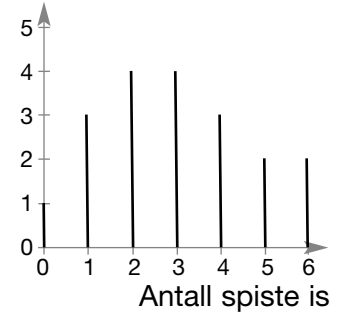
b) $64 \text{ dm}^3 - 62,8 \text{ dm}^3 = \underline{\underline{1,2 \text{ dm}^3}}$

FASIT TIL KAPITTEL B STATISTIKK

B 1

a) Opptelling	Frekvens
I	1
III	3
IIII	4
IIII	4
III	3
II	2
II	2

b) Frekvens

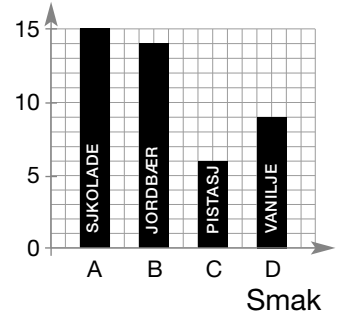


c) 19

B 2

a) Smak	Frekvens
A	15
B	14
C	6
D	9

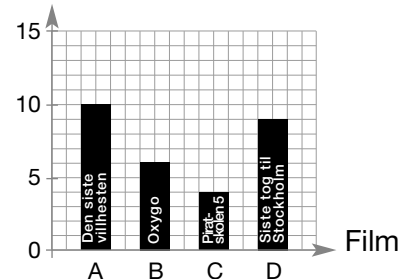
b) Frekvens



B 3

a) Film	Frekvens
A	10
B	6
C	4
D	7

b) Frekvens



c) Den siste villhesten

B 6

$$\frac{6 + 7 + 4 + 3}{4} = \frac{20}{4} = \underline{\underline{5}}$$

B 7

$$\frac{12 + 11 + 7 + 4 + 9 + 6 + 7}{7} = \frac{56}{7} = \underline{\underline{8}}$$

B 8

$$\frac{7 + 12 + 3 + 9 + 8 + 10 + 11}{7} = \frac{60}{7} = \underline{\underline{8,57}}$$

B 9

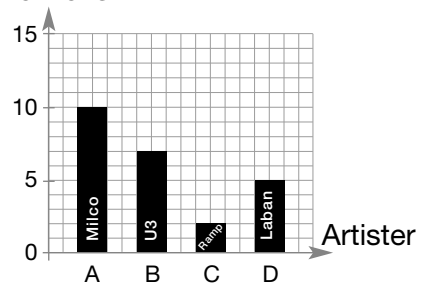
a) 10

$$b) \frac{(46 + 52 + 47 + 59 + 56 + 60 + 58 + 60 + 61 + 51) \text{ m}}{10} = \frac{550 \text{ m}}{10} = \underline{\underline{55 \text{ m}}}$$

PRØV DEG SELV/PRØV DEG SJØLV**PB 1**

a) Film	Frekvens
A	10
B	7
C	2
D	5

b) Frekvens

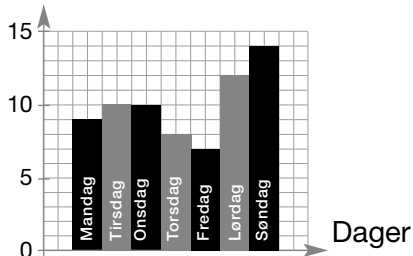


c) Milco, A

PB 2

$$a) \frac{9 + 10 + 10 + 8 + 7 + 12 + 14}{7} = \frac{70}{7} = \underline{\underline{10}}$$

b) Frekvens antall timer søvn



c) Søndag

c) Fredag

FASIT TIL KAPITTEL C ALGEBRA

C 1

a) $3 \cdot 4 = 12$

b) $2 \cdot c = 2 \cdot 7 = 14$

c) $6b = 6 \cdot 3 = 18$

d) $5b = 5 \cdot 5 = 25$

e) $4a = 4 \cdot 10 = 40$

f) $7 \cdot b = 7 \cdot 5 = 35$

C 2

a) $2a + 3 \cdot b = 2 \cdot 4 + 3 \cdot 3 = 8 + 9 = \underline{17}$

b) $3a + 5 \cdot b = 3 \cdot 6 + 5 \cdot 2 = 18 + 10 = \underline{28}$

c) $4a + b = 4 \cdot 5 + 10 = 20 + 10 = \underline{30}$

d) $5a - 2a = 5 \cdot 5 - 2 \cdot 3 = 25 - 6 = \underline{19}$

e) $2a - b = 2 \cdot 7 - 4 = 14 - 4 = \underline{10}$

C 3

a) $2 \cdot a + 3 \cdot b + 5 = 2 \cdot 6 + 3 \cdot 2 + 5 = 12 + 6 + 5 = \underline{23}$

b) $6 \cdot a + 4b + 10 = 6 \cdot 2 + 4 \cdot 5 + 10 = 12 + 20 + 10 = \underline{42}$

c) $5 \cdot a + 4 \cdot b - 7 = 5 \cdot 5 + 4 \cdot 3 - 7 = 25 + 12 - 7 = \underline{30}$

d) $10 \cdot a - 2 \cdot b - 6 = 10 \cdot 4 - 2 \cdot 7 - 6 = 40 - 14 - 6 = \underline{20}$

C 4

a) $5 \cdot a + 3b = 5 \cdot 8 + 3 \cdot 5 = 40 + 15 = \underline{55}$

b) $a - b = 12 - 7 = \underline{5}$

c) $7a - 3b = 7 \cdot 3 - 3 \cdot 6 = 21 - 18 = \underline{3}$

d) $5a + 5b + 5 = 5 \cdot 4 + 5 \cdot 3 + 5 = 20 + 15 + 5 = \underline{40}$

e) $4a + 3b - 7 = 4 \cdot 5 + 3 \cdot 3 - 7 = 20 + 9 - 7 = \underline{22}$

f) $7a \cdot 4b - 5 = 7 \cdot 3 - 4 \cdot 4 - 5 = 21 - 16 - 5 = \underline{0}$

C 5

a) $2a + 3b + 5a + 2b = 2a + 5a + 3b + 2b = \underline{7a + 5b}$

b) $6a + 3a + 7b + b = \underline{9a + 8b}$

c) $4a + 9b + 2a + 3a = 4a + 2a + 3a + 9b = \underline{9a + 9b}$

d) $3a + 2a + 3a + 4b + 2b = \underline{8a + 6b}$

C 6

- a) $5a + 2a + 6b + 3b + 7 + 1 = 7a + 9b + 8$
 b) $8a + 4a + b + 7b + 2 + 5 = 12a + 8b + 7$
 c) $2a + a + 8b + 9 + 4 = 3a + 8b + 13$
 d) $3a + 4a + 5b + 2b + 6 + 1 = 7a + 7b + 7$

C 7

- a) $5a + 3a + 4b + 2b = 2a + 6b$ b) $8a - 4a + 9b - 3b = 4a + 6b$
 c) $6a + 2a + 5b - b = 8a + 4b$ d) $7a - 2a + 8b = 5a + 8b$
 e) $9a - 3a + 10b - 5b = 6a + 5b$ f) $3a - 2a + 12b - 4b = a + 8b$

C 8

- a) $4a + 2a + 5b - 3b + 7 = 6a + 2b + 7$
 b) $5a + 3a + 10b - 5b + 2 + 1 = 8a + 5b + 3$
 c) $7a - 4a + 6b - 2b + 8 - b = 3a + 4b + 2$
 d) $8a + 7b - 4b + 3 - 3 = 8a + 3b$
 e) $3a - a + 9b - 3b + 5 + 2 = 2a + 6b + 7$
 f) $10a - 2a + 2b - 2b - b + 4 = 8a - b + 4$
 g) $a - a + 5b + 12 - 2 = 5b + 10$
 h) $6a - 5a + 8b + 9 - 8 = a + 8b + 1$
 i) $2a + 3a + 4b - b + 3 = 5a + 3b + 3$
 j) $9a - 2a + 3b \cdot b + 5c - 2 = 7a + 2b + 3c$

C 11

- a) 10 b) 100 c) 1000 d) 10000 e) 100000 f) 1000000

C 12

- a) $10 \cdot 10$ b) $10 \cdot 10 \cdot 10$ c) $10 \cdot 10 \cdot 10 \cdot 10$
 d) $10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$ e) $10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$

C 13

- | | | |
|------|---|---|
| a) 3 | $10 \cdot 10 \cdot 10$ | 3 |
| 4 | $10 \cdot 10 \cdot 10 \cdot 10$ | 4 |
| 5 | $10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$ | 5 |
| 6 | $10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$ | 6 |

C 15

a) 1 000	$10 \cdot 10 \cdot 10$	3	10^3
10 000	$10 \cdot 10 \cdot 10 \cdot 10$	4	10^4
100 000	$10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$	5	10^5
1 000 000	$10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$	6	10^6

b) Antall nuller og eksponent tallet er likt

C 16

a) $5 \cdot 100 = 5 \cdot 10^2$ b) $3 \cdot 100 = 3 \cdot 10^2$ c) $4 \cdot 1000 = 4 \cdot 10^3$

C 17

a) $6 \cdot 1\,000 = 6 \cdot 10^3$ b) $8 \cdot 10\,000 = 8 \cdot 10^4$
 c) $9 \cdot 100\,000 = 9 \cdot 10^5$ d) $7 \cdot 1\,000\,000 = 7 \cdot 10^6$
 e) $3 \cdot 100\,000\,000 = 3 \cdot 10^8$

C 18

a) $5^3 = 125$ b) $6^5 = 46656$

C 19

a) $2^3 = 8$ b) $5^4 = 625$ c) $7^2 = 49$
 d) $4^5 = 1024$ e) $8^3 = 512$ f) $3^4 = 81$
 g) $12^3 = 1724$ h) $23^2 = 529$

C 20

a) 6^4 b) 8^3 c) 4^2 d) 14^{11} e) 5^6 f) 24^3

C 21

5^2	$5 \cdot 5$	25
2^3	$2 \cdot 2 \cdot 2$	8
4^2	$4 \cdot 4$	16
3^3	$3 \cdot 3 \cdot 3$	27
6^2	$6 \cdot 6$	36

C 22

a) 16 b) 27
 c) 25 d) 81
 e) 10 000 f) 32

C 23

c) $4 \cdot a$

C 24

a) $5 \cdot a = 5 \cdot 4 = 20$ b) a) $5 \cdot a = 5 \cdot 7 = 35$
 c) $5 \cdot a = 5 \cdot 1 = 5$ d) a) $5 \cdot a = 5 \cdot 3 = 15$

C 25

- a) $5a + 4b = 5 \cdot 6 + 4 \cdot 4 = 30 + 16 = \underline{\underline{46}}$
b) $3a + 6b = 3 \cdot 5 + 6 \cdot 2 = 15 + 12 = \underline{\underline{27}}$
c) $4a - 2a = 4 \cdot 3 - 2 \cdot 10 = 12 - 20 = \underline{\underline{-8}}$

C 26

- a) $3 \cdot a + 7 \cdot b + 5 = 3 \cdot 6 + 7 \cdot 2 + 5 = 18 + 14 + 5 = \underline{\underline{37}}$
b) $4 \cdot a + 4 \cdot b + 12 = 4 \cdot 3 + 4 \cdot 5 + 12 = 12 + 20 + 12 = \underline{\underline{44}}$
c) $9 \cdot a + 3 \cdot b - 7 = 9 \cdot 5 + 3 \cdot 3 - 7 = 45 + 9 - 7 = \underline{\underline{47}}$
d) $a - 10 \cdot b - 6 = 12 - 10 \cdot 7 - 6 = 12 - 70 - 6 = \underline{\underline{-64}}$
e) $4 \cdot a + 2 \cdot b - 6 = 4 \cdot 9 + 2 \cdot 8 - 6 = 36 + 16 - 6 = \underline{\underline{46}}$
f) $5 \cdot a - 2 \cdot b - 5 = 5 \cdot 5 - 2 \cdot 10 - 5 = 25 - 20 - 5 = \underline{\underline{0}}$

C 27

- a) $4a + 2a + 3b + 5b = 6a + 8b$ b) $3a + 6a + 7b + 2b = 9a + 9b$
c) $5a + 2a + a + 7b = 8a + 7b$ d) $9a + a + 5a + 5b + b = 15a + 6b$
e) $6a + a + 6b + b = 7a + 7b$
f) $2a + 5a + 3b + 4b + 10 = 7a + 7b + 10$
g) $5a + 2a + 7b + 3b + 4 + 1 = 7a + 10b + 5$
h) $8a + a + b + 7b + 2 + 9 = 9a + 8b + 11$
i) $a + a + 5b + 11 + 4 = 2a + 5b + 15$
j) $3a + 2a + 6b + 3b + 6 + 2 = 5a + 9b + 8$

C 28

- a) $4a - 2a + 5b + 3b + 4 = 2a + 8b + 4$
b) $5a + 3a + 9b - 4b + 1 = 8a + 5b + 1$
c) $8a - 4a + 4b - 2b + 6 + 2 = 4a + 2b + 8$
d) $12a + 6b - 4b + 4 - 3 = 12a + 2b + 1$
e) $3a - a + 8b - 3b + 5 - 5 = 2a + 2b$
f) $10a - 5a + 3b - 2b + 7 = 5a + b + 7$
g) $10a + b - b + 12 - 2 = 10a + 10$
h) $a + 8b - 7b + 9 - 8 = a + b + 1$
i) $2a - a + 3b - b + 4 = a + 2b + 4$
j) $4a - 3a + 2b - b + 3c - 2c = a + b + c$

C 29

- a) 6 000 b) 20 000 c) 300 000 d) 2 000 000

C 30

- a) 100 b) 10 000 c) 100 000

C 31Navn: Potensb) $10 \cdot 10 \cdot 10 \cdot 10$ Navn: Eksponent

c) 10 000

Navn: Grunntall**C 32**

10 000	$10 \cdot 10 \cdot 10 \cdot 10$	4	10^4
100 000	$10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$	5	10^5
1 000 000	$10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$	6	10^6
1000	$10 \cdot 10 \cdot 10$	3	10^3

C 33

- a) $5 \cdot 1000 = 5 \cdot 10^3$ b) $4 \cdot 100 = 4 \cdot 10^2$
 c) $3 \cdot 10\,000 = 3 \cdot 10^4$ d) $4 \cdot 100\,000 = 4 \cdot 10^6$

C 34

- a) 2^3 b) 4^4 c) 7^6

C 35

- 5^3 6^7 2^5 8^9 17^4 52^3

C 36

Potensform	Produktform	Tall
6^2	$6 \cdot 6$	36
3^3	$3 \cdot 3 \cdot 3$	27
2^5	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$	32
5^3	$5 \cdot 5 \cdot 5$	125
5^2	$5 \cdot 5$	25
9^2	$9 \cdot 9$	81

PRØV DEG SELV/PRØV DEG SJØLV

PC 1

b) $5 \cdot a$

PC 2

a) $6 \cdot a = 6 \cdot 3 = 18$ b) $2 \cdot a = 2 \cdot 6 = 12$ c) $7 \cdot a = 7 \cdot 1 = 7$

PC 3

a) $3a + 2b = 3 \cdot a + 3 \cdot b = 3 \cdot 5 + 2 \cdot 6 = 15 + 12 = 27$

b) $4 \cdot a + 5 \cdot b = 4 \cdot 4 + 5 \cdot 3 = 16 + 15 = 31$

c) $2 \cdot a - 3 \cdot b = 2 \cdot 9 - 3 \cdot 5 = 18 - 15 = 3$

PC 4

a) $2 \cdot a + 4 \cdot b + 5 = 2 \cdot 8 + 4 \cdot 2 = 16 + 8 + 5 = 29$

b) $3 \cdot a + 2 \cdot b - 7 = 3 \cdot 7 + 2 \cdot 9 - 7 = 21 + 18 - 7 = 32$

c) $6 \cdot a - 3 \cdot b - 8 = 6 \cdot 6 - 3 \cdot 7 - 8 = 36 - 21 - 8 = 7$

PC 5

a) $2a + 4b + 4b + 3b = 7a + 7b$

b) $4a + 3a + 2b + 5b + 12 = 7a + 7b + 12$

c) $7a + 2b + 3b + 4b + 4 + 2 = 9a + 7b + 6$

d) $9a + a + 5b + b + 3 + 1 = 10a + 6b + 4$

e) $6a + 3a + 4b + 2b + 5 + 4 = 3a + 6b + 9$

f) $8a + 4b + 6b - 6b + 4 - 2 = 4a + 2$

PC 6

1 000	$10 \cdot 10 \cdot 10$	3	10^3
10 000	$10 \cdot 10 \cdot 10 \cdot 10$	4	10^4
100 000	$10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$	5	10^5

PC 7

Potensform	Produktform	Tall
5^2	$5 \cdot 5$	25
3^2	$3 \cdot 3$	9
2^4	$2 \cdot 2 \cdot 2 \cdot 2$	16
3^2	$3 \cdot 3$	9

PC 8

a) 4^3 b) 9^5 c) 23^4 d) 15^{11}