

Randi Løchsen · Jan Erik Gulbrandsen · Arve Melhus

nye MEGA 8A

Matematikk for ungdomstrinnet

Fasit

Engangsbok 8A

NYE MEGA 8A ENGANGSBOK

KAPITTEL A GEOMETRI 1

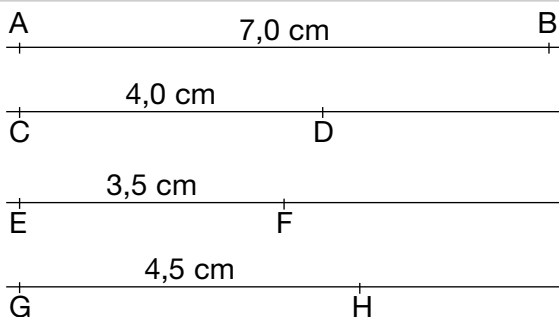
A 1

–

A 2

a) IJ b) MN c) – d) 7,9 cm

A 3



A 4

a) ————— b) |—————| c) |—————|

A 5

–

A 6

a) 45 ° b) 60 ° c) 30 ° d) 45° e) 105°

A 7

Øvre del fra venstre: spiss, rett og stump vinkel

Nedre del fra venstre: stump vinkel, like vinkel og spiss vinkel

A 8

a) Følgende vinkler er spisse: B, C, D, E, F, H, I, J, L.

b) Vinkel A er rett.

c) Følgende vinkler er stump: G og K.

A 9

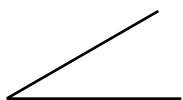
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A 10

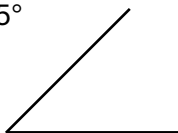
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A 11

a) 30°



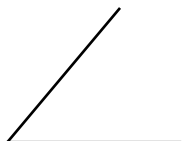
b) 45°



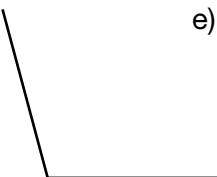
c) 90°



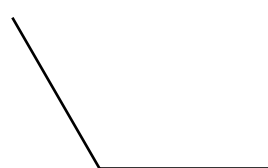
c) 50°



d) 105°



e) 120°



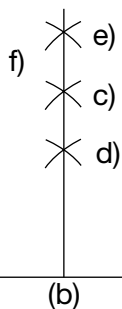
A 12

-

A 13

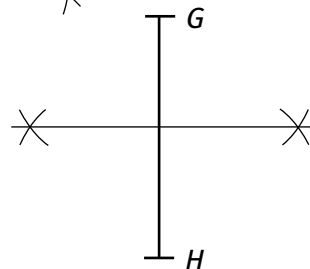
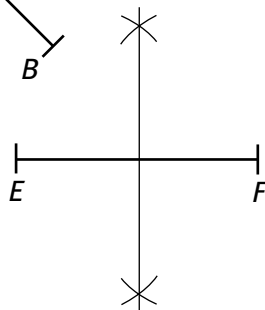
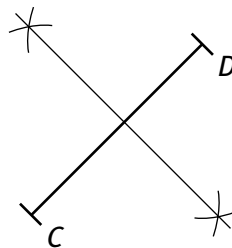
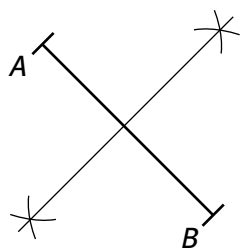
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A 14

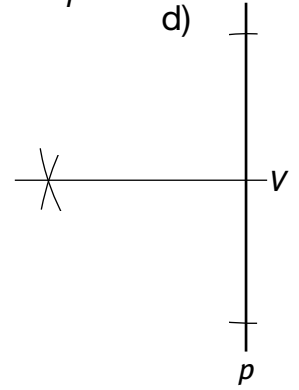
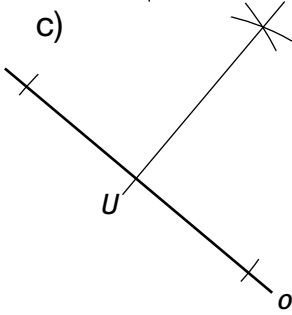
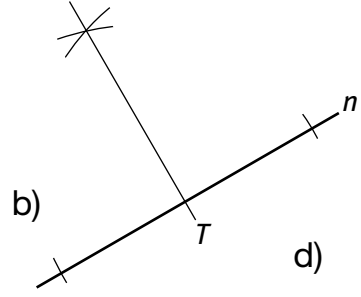
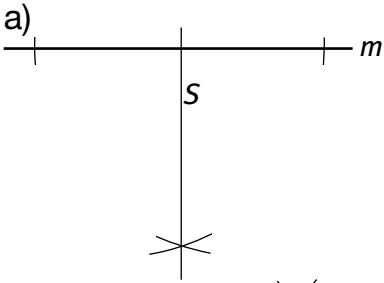


g) Linjen står vinkelrett på linjestykket AB

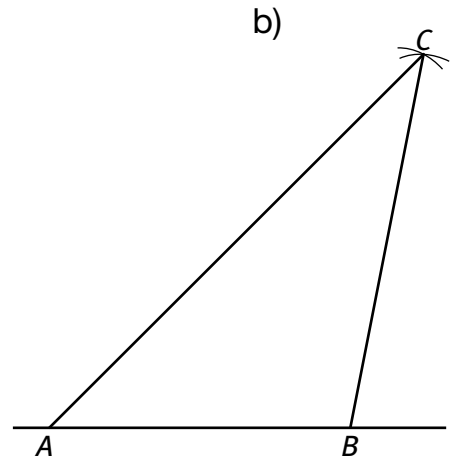
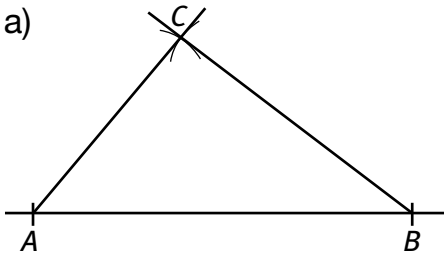
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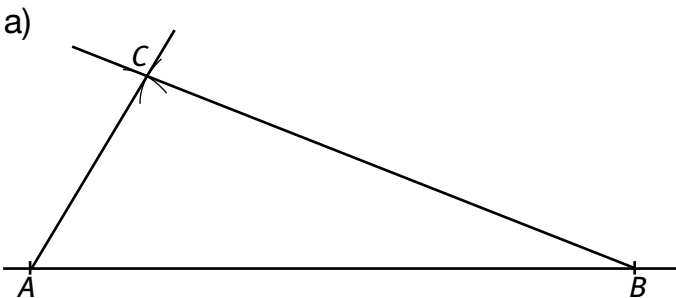
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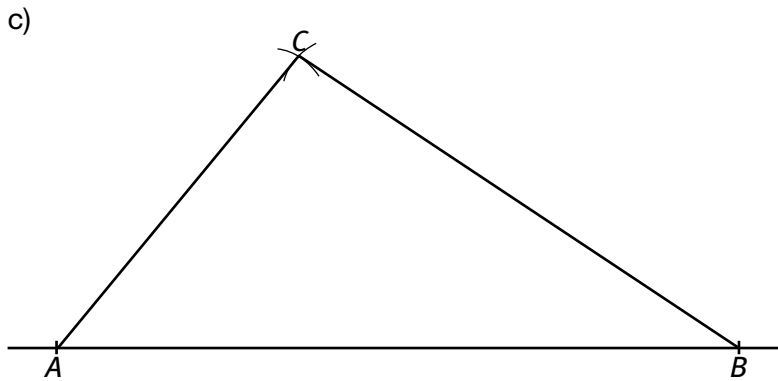
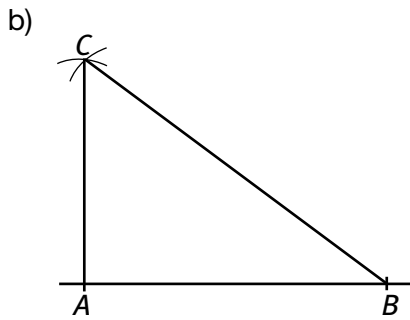


A 17



A 18



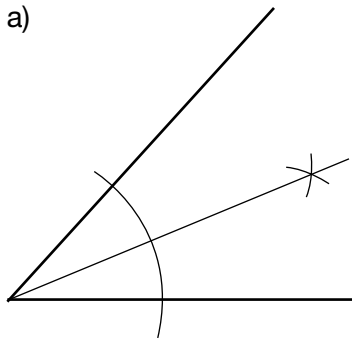


A 19

-

A 20

a)

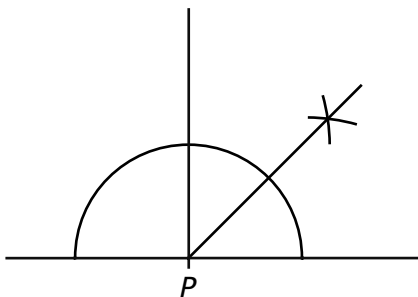


b) De to nye vinklene er 24°

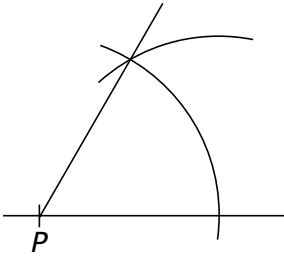
A 21

-

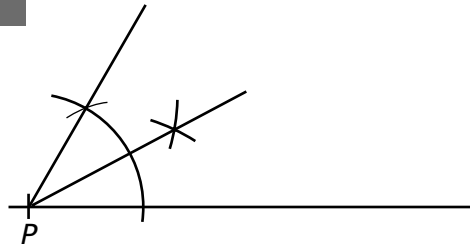
A 22



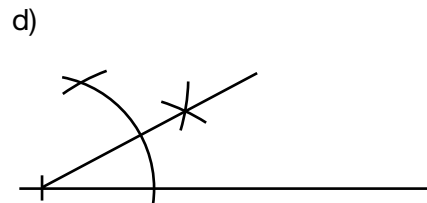
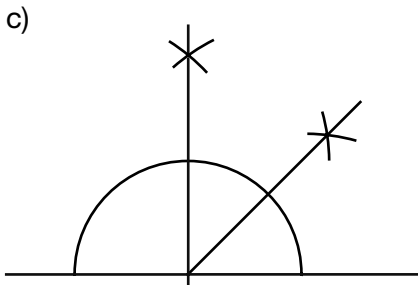
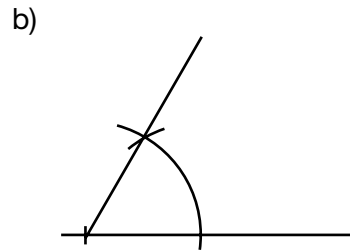
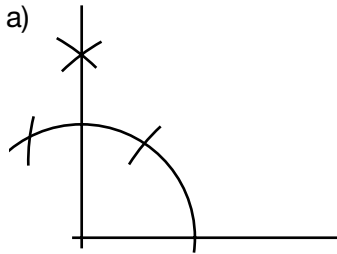
A 23



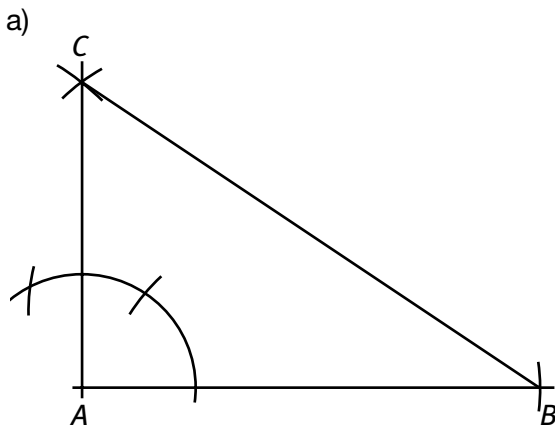
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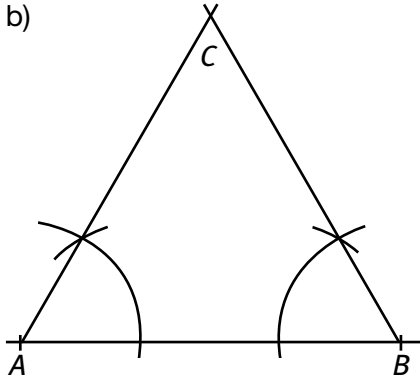


A 25

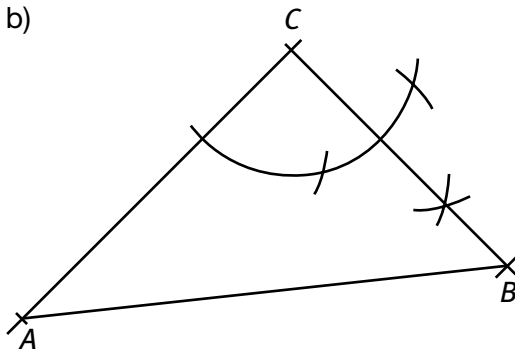
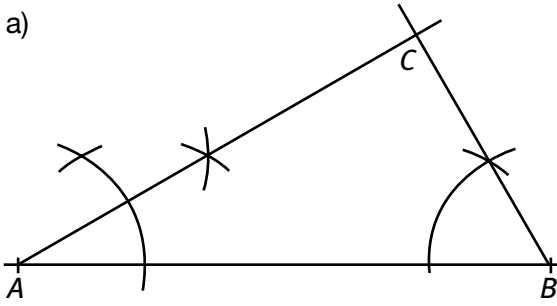


A 26

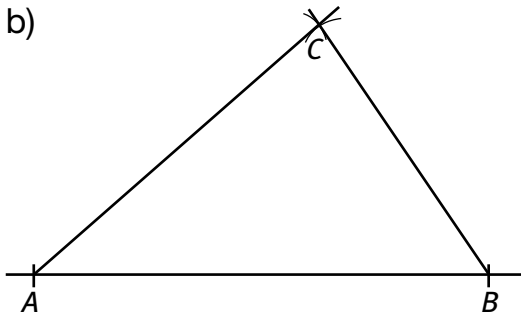
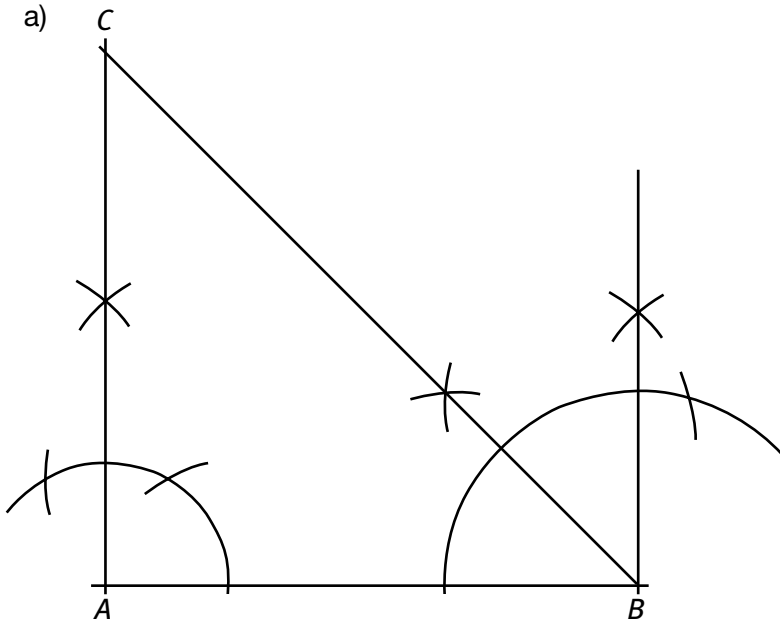




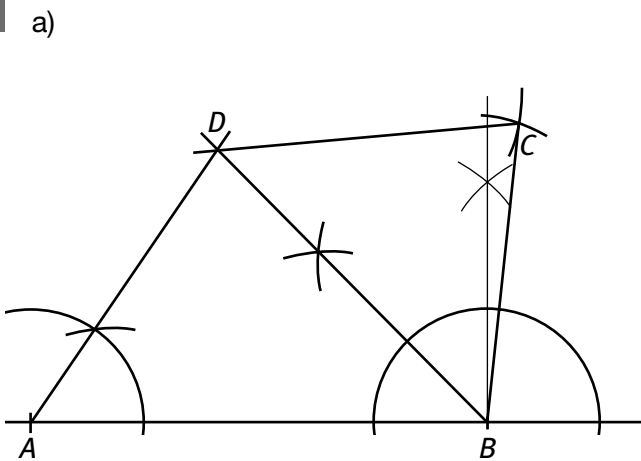
A 27

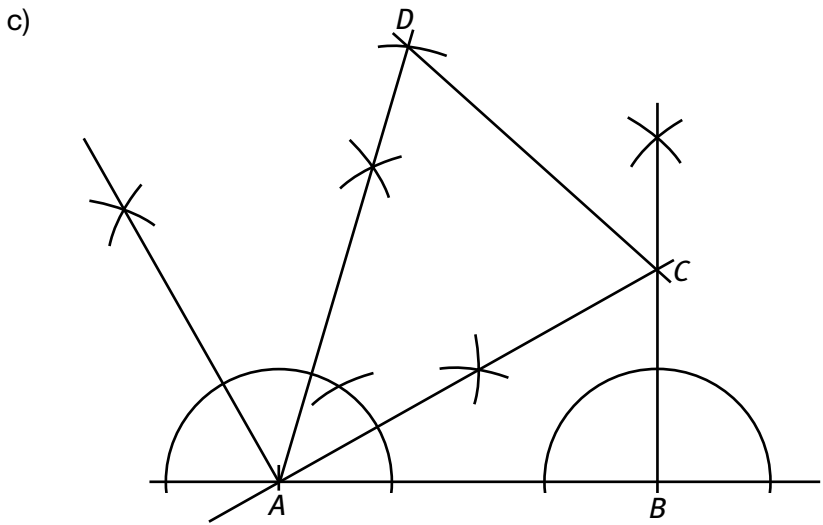
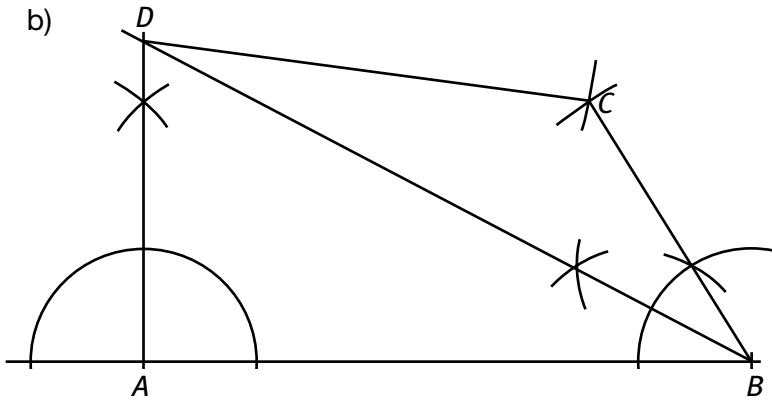


A 28

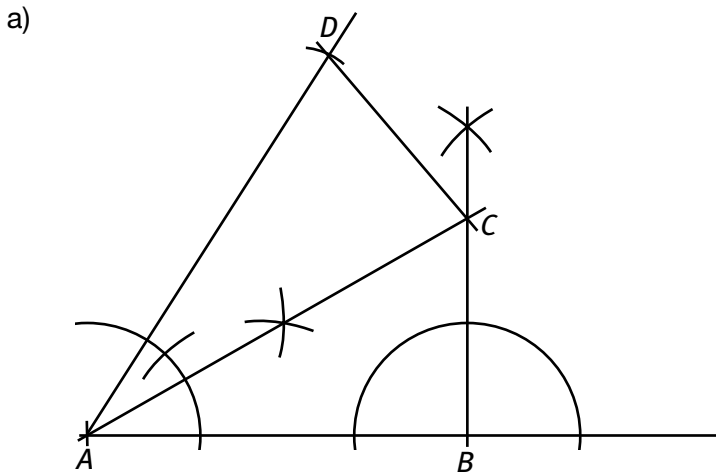


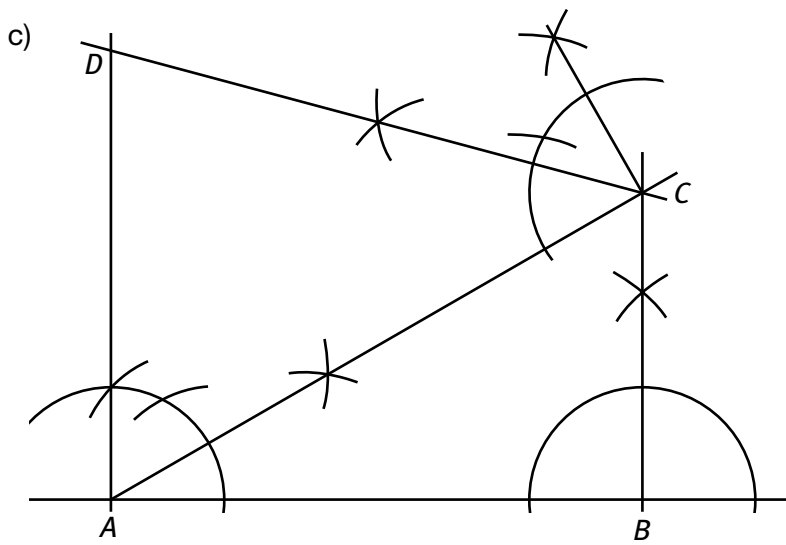
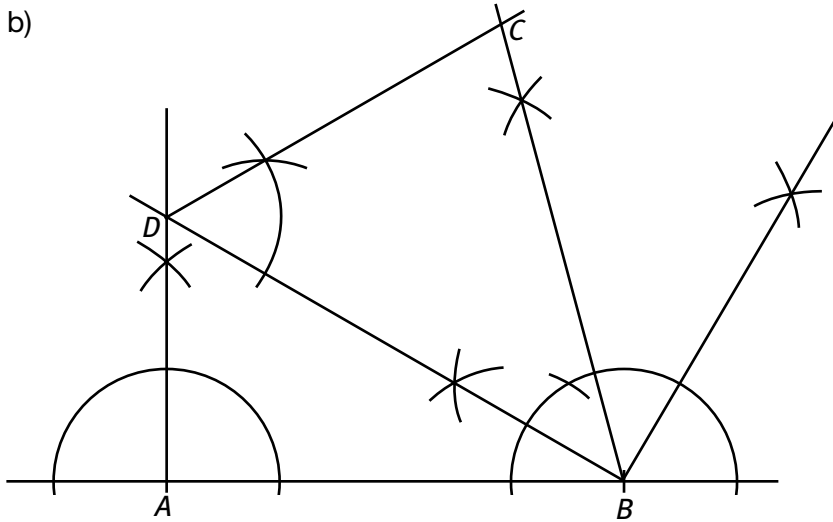
A 29





A 30





A 31 a) 9 cm b) 5,5 cm c) 4,5 cm d) 7 cm e) 9,5 cm

A 32 -

A 33 a) 5 cm b) 4 cm c) 6,8 cm d) 9 cm e) 10,8 cm f) 15,8 cm

A 34 a) linje b) linjestykke c) stråle d) spiss vinkel
 e) rett vinkel f) stump vinkel

A 35

360°

A 36

Øverste klokkekette:	90°	60°	30°
Nedre klokkekette:	150°	210°	270°

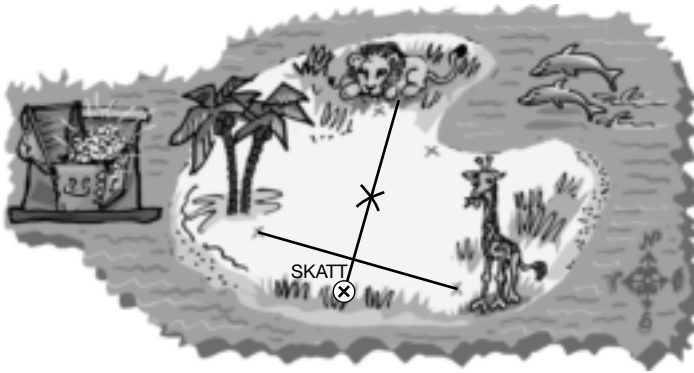
A 37

-

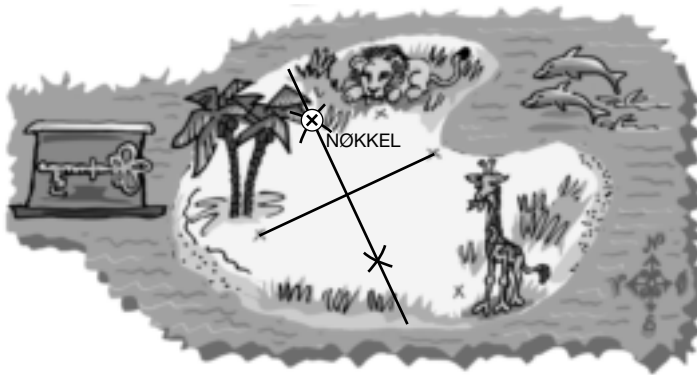
A 38

-

A 39



A 40

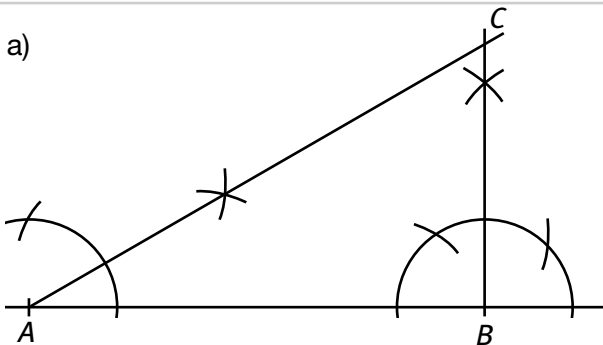


A 41

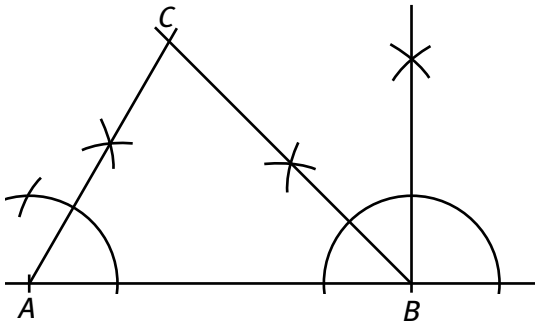
-

A 42

a)

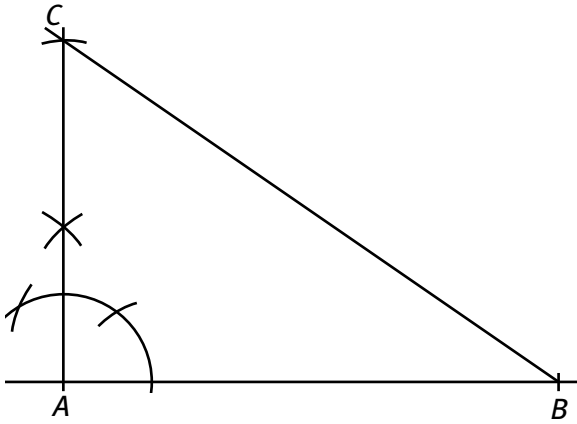


b)

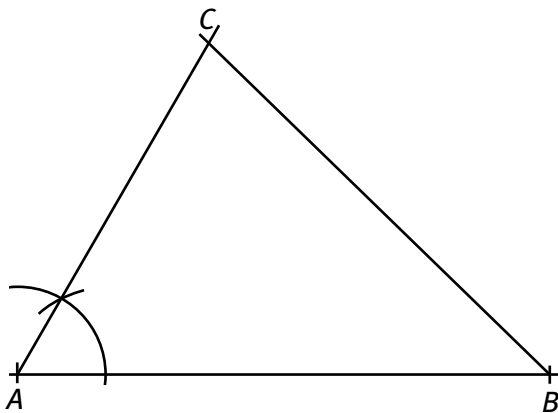


A 43

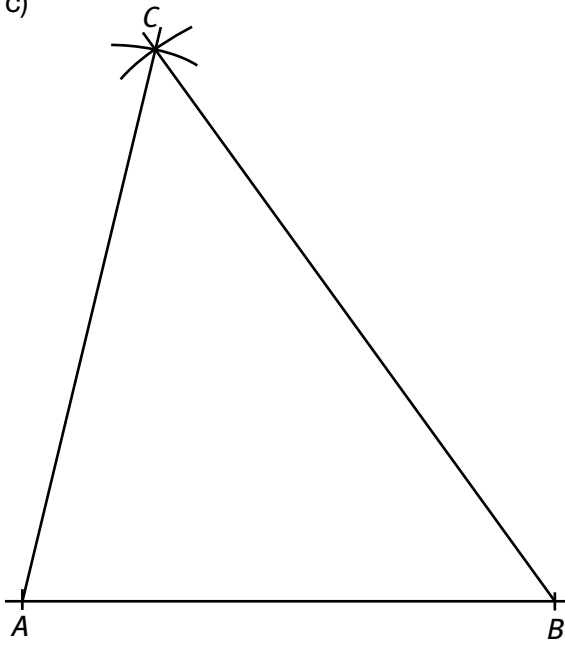
a)



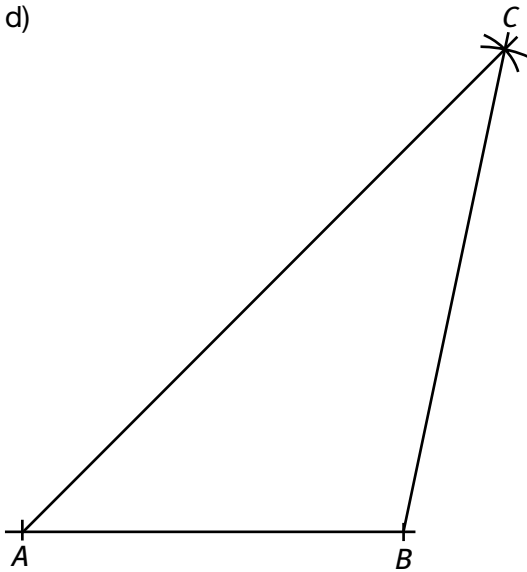
b)



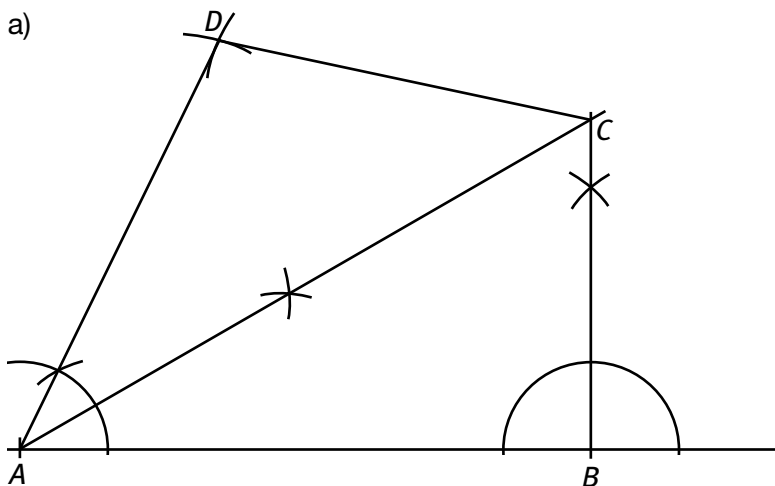
c)



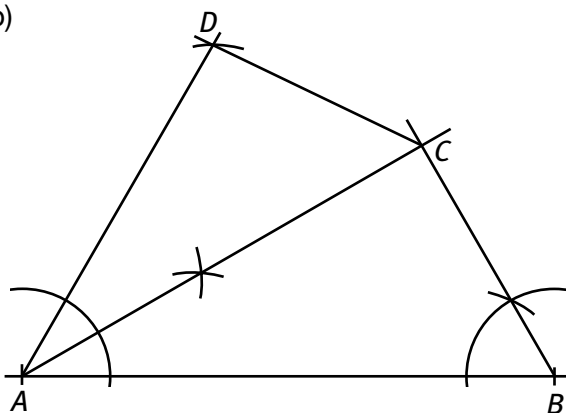
d)



a)



b)



PRØV DEG SELV

PA 1

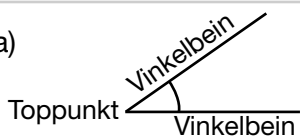
Linjestykke |—————|

Linje —————

Stråle |—————>

PA 2

a)

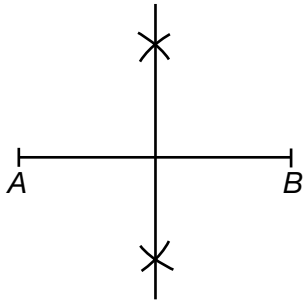


b) 35°

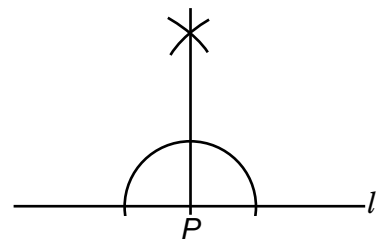
PA 3

Fra venstre: Rett vinkel, spiss vinkel, stump vinkel

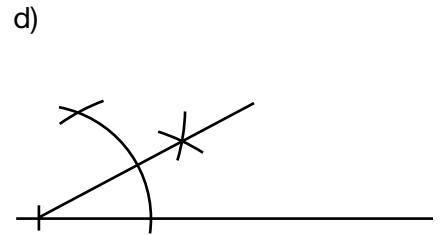
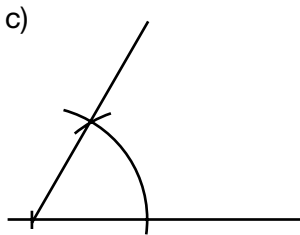
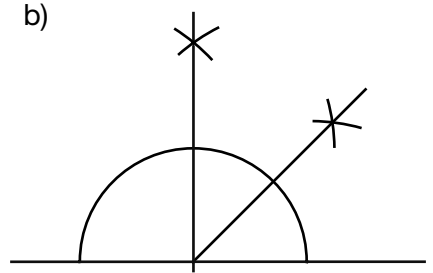
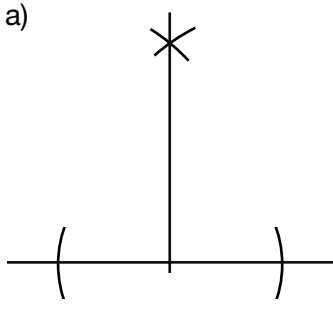
PA 4



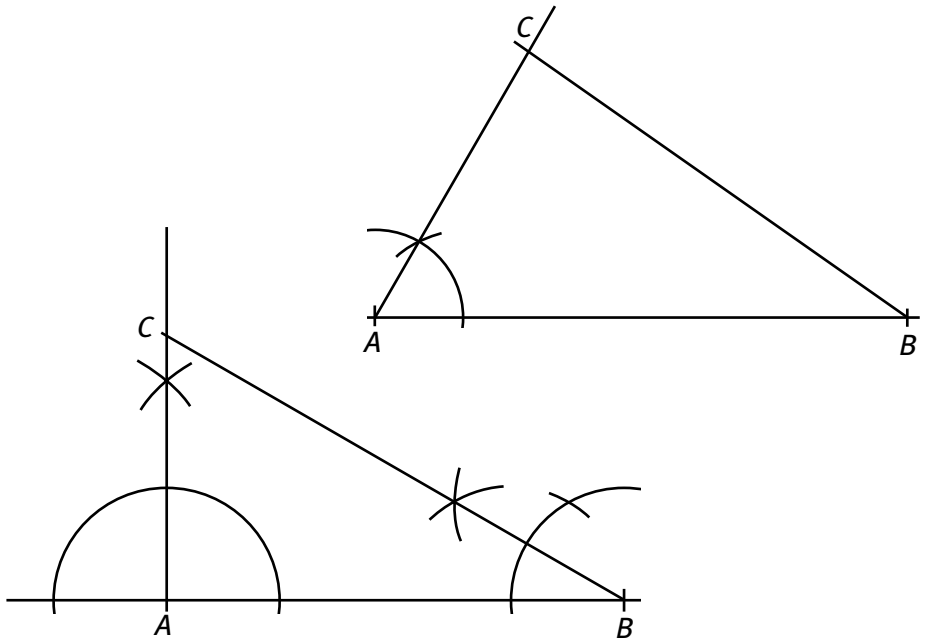
PA 5



PA 6



PA 7



KAPITTEL B TALL OG TALLREGNING

B 1

–

B 2

a) Maren b) Antall liter og pris pr. liter

B 3

Amir

B 4

a) Adressen b) Farten

B 5

a) Prisen på pærer b) Alderen til Anders

B 6

–

B 7

Multiplikasjon

B 8

Subtraksjon

B 9

Divisjon

B 10

Addisjon

B 11

d)

B 12

b)

B 13

–

B 14

a) 5 b) 17 c) 10 d) 6 e) 6 f) 12
g) 9 h) 20 i) 24 j) 2 k) 4 l) 5

B 15

a) 356 b) 239 c) 5 276 d) 200

B 16

a) 22 b) 221 c) 3 722 d) 558

B 17

a) 36 b) 180 c) 246 d) 972 e) 12 710 f) 26 172

B 18

a) 21 b) 42 c) 43 d) 65 e) 684

B 19

2 ,4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30.

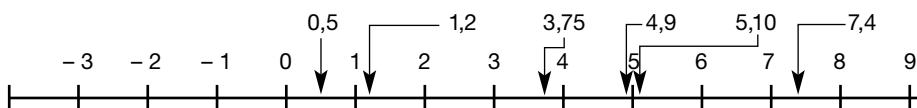
B 20

a) partall b) partall c) oddetall d) partall e) partall f) oddetall

B 21

Ja

B 22



B 23	a) 6,8	b) 19,8	c) 28,97	d) 4,67	e) 72,4	f) 10,44
B 24	a) 0,3	b) 1,4	c) 11,1	d) 26,1	e) 1,61	f) 0,53
B 25	a) 7,9 hg	b) 1,5 hg		B 26	a) 6,1 km	b) 0,5 km
B 27	a) -1	b) -2	c) -3	d) -1	e) -2	f) -3
B 28	a) 2 °C	b) 0 °C	c) -10 °C			
B 29	a) -5 °C	b) 0 °C	c) 10 °C			
B 30	a) 3 g) 0	b) 3 h) 0	c) 0 i) -5	d) 4	e) 2	f) 1
B 31	a) -4 g) 0	b) -3 h) -5	c) -2 i) -7	d) -1	e) -2	f) -3
B 32	-					
B 33	a) 10, 100, 1000 d) 4, 40, 400 g) 3, 30, 300	b) 15, 150, 1500 e) 12, 120, 1200 h) 5, 50, 500	c) 4, 40, 400 f) 21, 210, 2100			
B 34	-					
B 35	a) 67	b) 670	c) 340	d) 211		
B 36	a) 23	b) 230	c) 217	d) 994		
B 37	-					
B 38	a) 68	b) 219	c) 696	d) 2096	e) 32 265	f) 22 788
B 39	-					
B 40	a) 21	b) 42	c) 43	d) 56	e) 65	f) 684

B 41	410 flasker	B 42	Aud gjorde 241 stup	
B 43	53 fyrstikker	B 44	57 kr	B 45 3950 kr
B 46	a) 378 kr b) 122 kr	B 47	312 kr	B 48 1608 kr
B 49	39 590 skolemelk	B 50	12 kr	B 51 145 kr
B 52	2,976 kg	B 53	84,1 kg	B 54 644 kr
B 55	1,43 m	B 56	58 kr	B 57 4,8 kg
B 58	a) 15 °C b) - 15°C c) 30 °C			
B 59	a) 21 °C b) 14 °C c) 13 °C d) 5 °C e) 7 °C			
B 60	a) 2 °C b) 0 °C c) -2 °C			
B 61	a) -2 °C b) 0 °C c) 2 °C			
B 62	23 °C			
B 63	a) 2, 1, 0, -1, -2 c) 4, 1, 0, -2, -4	b) -3, -2, -1, 0, -1 d) -5, -4, -8, -9, -3		
B 64	-			
B 65	a) $5 - 2 + 3 = 6$ d) $6 - 3 - 3 = 0$ f) feil i oppgaven; skal være $-5 + 4 - 6 = -7$	b) $6 + 3 - 2 = 7$ e) $4 + 2 - 9 = -3$	c) $1 + 4 - 5 = 0$	
B 66	-			

PRØV DEG SELV

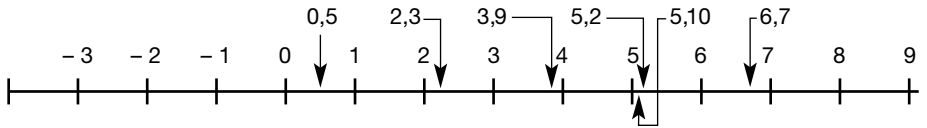
PB 1	$12,50 \cdot 4$			
PB 2	a) 10 b) 7 c) 15 d) 5			

PB 3

- a) 476 b) 473 c) 36 d) 710

PB 4

- a) 60 b) 936 c) 12 315 d) 23 e) 47 f) 465

PB 5**PB 6**

146 julestjerner

PB 7

150 kr

PB 8

- a) 58,9 kg b) 11,5 kg

PB 9

81 kr

PB 10

8,50 kr

PB 11

- a) 648 kr b) 352 kr

PB 12

- a) 5 b) -4 c) 5 d) -8

PB 13

- a) 3 °C b) 0 °C c) -3 °C

PB 14

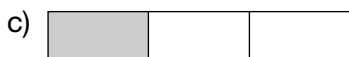
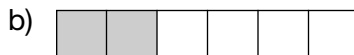
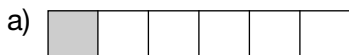
- a) -3 °C b) 0 °C c) 2 °C

KAPITTEL C BRØK OG PROSENT

C 1

-

C 2



d) $\frac{1}{3}$

C 3

a) $\frac{1}{3}$

b) $\frac{1}{8}$

c) $\frac{2}{7}$

d) $\frac{7}{12}$

C 4

a) $\frac{2}{3}$

b) $\frac{3}{8}$

c) $\frac{5}{7}$

d) $\frac{13}{18}$

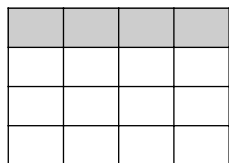
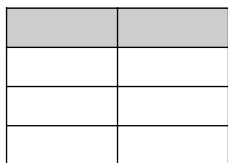
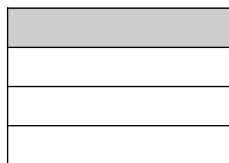
C 5

-

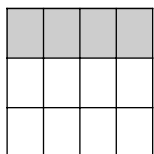
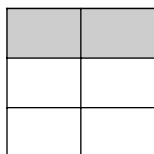
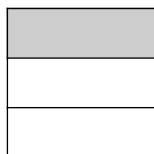
C 6

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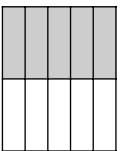
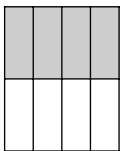
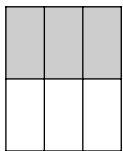
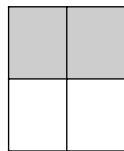
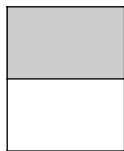
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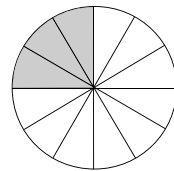
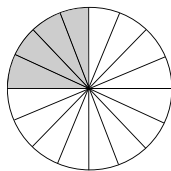
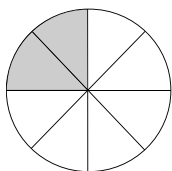
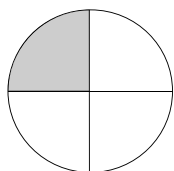
C 8



C 9



C 10



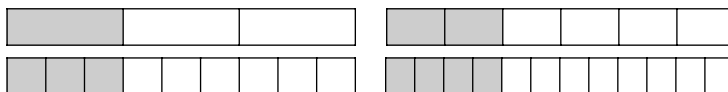
$\frac{1}{4}$

$\frac{2}{8}$

$\frac{4}{16}$

$\frac{3}{12}$

C 11



C 12

a) Trine grønn del, Said gul del, Anne oransje del

b) $\frac{5}{12}$

c) $\frac{1}{3} = \frac{4}{12}, \frac{1}{6} = \frac{2}{12}$

d) $\frac{1}{12}, \frac{1}{6}, \frac{1}{3}, \frac{5}{12}$

C 13

Brøk		Desimaltall
$\frac{1}{2}$	$1 : 2 = 0,5$	0,5
$\frac{1}{4}$	$1 : 4 = 0,25$	0,25
$\frac{2}{4}$	$2 : 4 = 0,5$	0,5
$\frac{3}{4}$	$3 : 4 = 0,75$	0,75
$\frac{4}{4}$	$4 : 4 = 1$	1,00

C 14

Brøk		Desimaltall
$\frac{1}{3}$	$1 : 3 = 0,333333 \dots$	0,33
$\frac{2}{3}$	$2 : 3 = 0,666666 \dots$	0,67
$\frac{3}{3}$	$3 : 3 = 1$	1,00

C 15

Brøk	Desimaltall
$\frac{1}{6}$	0,17
$\frac{2}{6}$	0,33
$\frac{3}{6}$	0,5

Brøk	Desimaltall
$\frac{1}{5}$	0,2
$\frac{2}{5}$	0,4
$\frac{4}{5}$	0,8

Brøk	Desimaltall
$\frac{1}{7}$	0,14
$\frac{3}{7}$	0,43
$\frac{6}{7}$	0,86

C 16

a) $\frac{3}{10} = 0,3$ b) $\frac{2}{10} = 0,2$ c) $\frac{6}{15} = 0,4$ d) $\frac{12}{30} = 0,4$ e) $\frac{11}{25} = 0,44$

C 17

a) $\frac{17}{48}$ eller 0,35 b) –

C 18

Brøk		Desimaltall
$\frac{1}{10}$	$1 : 10 = 0,1$	0,1
$\frac{3}{10}$	$3 : 10 = 0,3$	0,3
$\frac{5}{10}$	$5 : 10 = 0,5$	0,5
$\frac{9}{10}$	$9 : 10 = 0,9$	0,9
$\frac{10}{10}$	$10 : 10 = 1$	1,0

C 19

Brøk		Desimaltall
$\frac{1}{100}$	$1 : 100 = 0,01$	0,01
$\frac{3}{100}$	$3 : 100 = 0,03$	0,03
$\frac{10}{100}$	$10 : 100 = 0,1$	0,1
$\frac{50}{100}$	$50 : 100 = 0,5$	0,5
$\frac{75}{100}$	$75 : 100 = 0,75$	0,75
$\frac{100}{100}$	$100 : 100 = 1$	1

C 20

a) 4 dl

b) 0,4 l

C 21

a) 14 dl

b) 1,4 l

C 22

a) 5 dl

b) 2,5 dl

C 23

a) 1,5

b) 1,25

C 24

Desimal-tall	Brøk
0,4	$\frac{4}{10}$
0,6	$\frac{6}{10}$
0,2	$\frac{2}{10}$
0,8	$\frac{8}{10}$
1,0	$\frac{10}{10}$

C 25

Desimal-tall	Brøk
0,25	$\frac{25}{100}$
0,40	$\frac{40}{100}$
0,75	$\frac{75}{100}$
0,66	$\frac{66}{100}$
1,00	$\frac{100}{100}$

C 26

50 % i begge tilfeller

C 27

5%, 10 %, 15 %, 30 %

C 28

20 %

C 29

$$\frac{1}{2} = \frac{50}{100} = 0,5 = 50\%$$

$$\frac{1}{4} = \frac{25}{100} = 0,25 = 25\%$$

$$\frac{3}{4} = \frac{75}{100} = 0,75 = 75\%$$

$$\frac{1}{4} = \frac{25}{100} = 0,25 = 25\%$$

C 30

a) 87/100

b) 87 %

c) 0,87

d) 13/100

e) 0,13

f) 13 %

C 31

20 %

C 32

15 %

C 33

a) 15 %

b) 46 %

c) 25 %

d) 83,3 %

e) –

C 34

a) 15 %

b) 85 %

C 35

1 kr

2 kr

5 kr

10 kr

C 36

30 elever

C 37

a) 74

b) 26

C 38

2 kr

4 kr

10 kr

20 kr

C 39

48 elever

C 40

36 biler

C 41

120 g sukker

C 42

a) 120

b) 42

c) 24

d) 36

C 43

-

C 44

275 røde, 150 hvite og 75 rosa julestjerner

C 45

En bukse koster nå 413 kr

En genser koster nå 336 kr

En skjorte koster nå 231 kr

En T-skjorte koster nå 133 kr

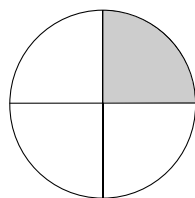
C 46

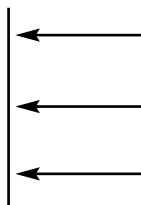
a) 625 kr

b) 1015 kr

c) 2320 kr

d) 1140 kr

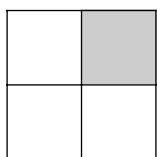
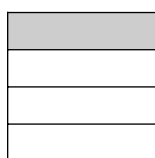
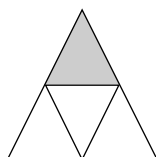
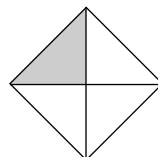
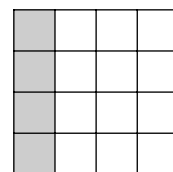
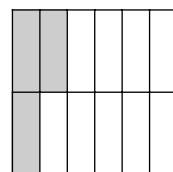
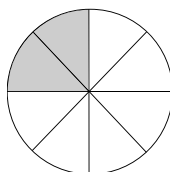
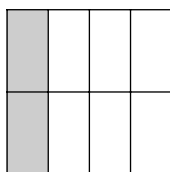
C 47

$$\frac{1}{4}$$


teller

brøkstrek

nevner

C 48 $\frac{2}{8}$  $\frac{2}{8}$  $\frac{3}{12}$  $\frac{4}{16}$ **C 49**

$\frac{3}{12} = \frac{1}{4}$

$\frac{2}{6} = \frac{1}{3}$

$\frac{2}{4} = \frac{1}{2}$

$\frac{6}{18} = \frac{1}{3}$

$\frac{2}{8} = \frac{1}{4}$

$\frac{3}{9} = \frac{1}{3}$

$\frac{4}{7}$

$\frac{3}{8}$

C 50

a) $\frac{10}{18}$

b) Jens får 6 ruter, Emil får 2 ruter og Lise får 10 ruter

C 51

a) Alle er like store

b) $\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12} = 0,33$

C 52

a) $\frac{1}{4} = \frac{2}{8} = \frac{4}{16}$

b) $\frac{1}{4} = \frac{2}{8} = \frac{4}{16} = 0,25$

C 53

a) $\frac{25}{54} = 0,46$

b) -

C 54

a) $\frac{13}{40} = 0,325$

b) -

C 55

a)

Brøk		Desimal-tall
$\frac{1}{2}$	1 : 2 =	0,5
$\frac{1}{3}$	1 : 3 =	0,33
$\frac{1}{4}$	1 : 4 =	0,25
$\frac{2}{3}$	2 : 3 =	0,67
$\frac{2}{4}$	2 : 4 =	0,5
$\frac{3}{4}$	3 : 4 =	0,75

b)

Brøk		Desimal-tall
$\frac{1}{10}$	1 : 10 =	0,1
$\frac{2}{10}$	2 : 10 =	0,2
$\frac{3}{10}$	3 : 10 =	0,3
$\frac{4}{10}$	4 : 10 =	0,4
$\frac{5}{10}$	5 : 10 =	0,5
$\frac{6}{10}$	6 : 10 =	0,6
$\frac{7}{10}$	7 : 10 =	0,7
$\frac{8}{10}$	8 : 10 =	0,8
$\frac{9}{10}$	9 : 10 =	0,9
$\frac{10}{10}$	10 : 10 =	1,0

c) 5 dl

d) 2,5 dl

e) 7,5 dl

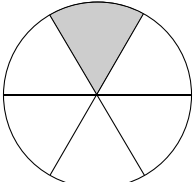
C 56

Brøk	Brøk med 100 som nevner	Desimal-tall	Prosent
$\frac{1}{2}$	$\frac{50}{100}$	0,50	50 %
$\frac{1}{3}$	$\frac{33}{100}$	0,33	33 %
$\frac{1}{4}$	$\frac{25}{100}$	0,25	25 %
$\frac{2}{3}$	$\frac{67}{100}$	0,67	67 %
$\frac{2}{4}$	$\frac{50}{100}$	0,5	50 %
$\frac{3}{4}$	$\frac{75}{100}$	0,75	75 %
$\frac{1}{10}$	$\frac{10}{100}$	0,1	10 %
$\frac{6}{10}$	$\frac{60}{100}$	0,6	60 %

C 57	a) 14 %	b) 86 %	C 58	a) 13,3 %	b) 86,7 %
C 59	a) 10 %	b) 90 %			
C 60	1 kr	2 kr	3 kr	4 kr	5 kr
C 61	5 kr	10 kr	25 kr		
C 62	20 kr	40 kr	140 kr		
C 63	40 kr	60 kr	128 kr		
C 64	a) 189 kr	b) 162 kr	c) 135 kr	d) 108 kr	
C 65	73 sandkaker	C 66	70 fine smultringer		
C 67	54 kakemenn				

PRØV DEG SELV

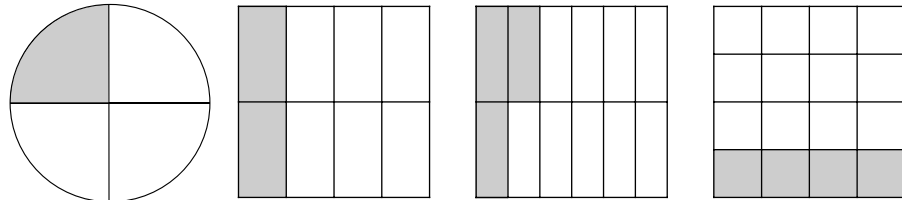
PC 1



$$\frac{1}{6}$$

← teller
← brøkstrek
← nevner

PC 2



$\frac{1}{4}$ $\frac{2}{8}$ $\frac{3}{12}$ $\frac{4}{16}$

PC 3

$\frac{2}{8} = \frac{1}{4}$ $\frac{2}{4} = \frac{1}{2}$ $\frac{3}{7}$ $\frac{3}{8}$

PC 4

a) De er like store. b) $\frac{1}{4} = \frac{2}{8} = \frac{4}{16} = 0,25$

PC 5	a) 0,5	b) 0,33	c) 0,25
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PC 6	a) 50 %	b) 33,3 %	c) 25 %
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PC 7	a) 18 %	b) 82 %	
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PC 8	a) 24 %	b) 20 %	c) 18,8 %
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PC 9	a) 120	b) 42	
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PC 10	a) 133 kr	b) 76 kr	
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