

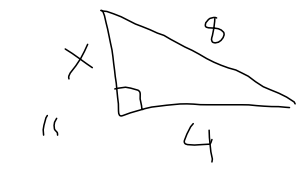
$(a+b)(a+b) =$
 $c \cdot c + 4 \left(\frac{a \cdot b}{2} \right)$
 $a^2 + ab + ab + b^2 = \frac{4ab + c^2}{2}$
 $a^2 + 2ab + b^2 = 2ab + c^2$
 $a^2 + b^2 = c^2$

$A = S \cdot S$
 $A = \frac{h \cdot b}{2}$

sep. 19-08.55

$a^2 + b^2 = c^2$
 $24^2 + 8^2 = c^2$
 $576 + 64 = c^2$
 $c^2 = 640$
 $c = \sqrt{640} = 25,3$

sep. 19-09.14



6,9

$$a^2 + b^2 = c^2$$

$$4^2 + b^2 = 8^2$$

$$16 + b^2 = 64$$

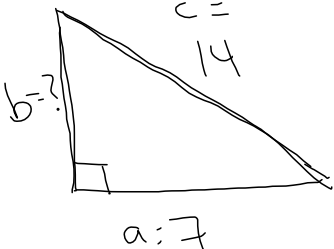
$$b^2 = 64 - 16$$

$$b^2 = 48$$

$$b = \sqrt{48}$$

$$= \underline{\underline{6,9}}$$

sep. 19-09.18



$$\underline{\underline{a^2 + b^2 = c^2}}$$

$$7^2 + b^2 = 14^2$$

$$\textcircled{49} + b^2 = 196 - 49$$

$$b^2 = 196 - 49 = 147$$

$$b = \sqrt{147} = \underline{\underline{12,1}}$$

$\sqrt{n} \cdot \sqrt{n} = n$

$$\sqrt{4} = 2$$

$$\sqrt{4} \cdot \sqrt{4} = \textcircled{4}$$

$$2 \cdot 2 = 4$$

$$4 \cdot 4 = 16$$

Kvadratrot

sep. 19-09.20

$b = \frac{c}{2}$

$30^\circ - 60^\circ - 90^\circ$

$8^2 = 4^2 + a^2$

$64 = 16 + a^2$

$64 - 16 = a^2$

$a^2 = \sqrt{48} = \underline{\underline{6,9}}$

sep. 19-09.26

Likebeint trekant

$a^2 + b^2 = c^2$

$x^2 + x^2 = 8^2$

$2x^2 = 8^2$

$x^2 = 32$

$x = \sqrt{32} = 5,7$

$x^2 = 9^2 + 9^2$

$x^2 = 81 + 81$

$x^2 = 162$

$x = \sqrt{162} = 12,7$

sep. 19-09.31

For å bruke Pytagoras

- Generelt må vi ha 2 sider oppjev + 90°

Uttale:

30-60-90°

er.

likebeint (90°, 45°, 45°)

sep. 19-09.35

$$\underbrace{(2x)}_c^2 = \underbrace{3^2}_a + \underbrace{x^2}_b$$

$$\underline{4x^2} = 9 + x^2$$

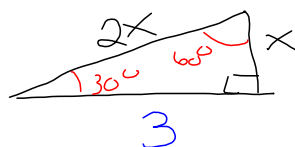
$$4x^2 - x^2 = 9$$

$$3x^2 = 9$$


$$x^2 = 3$$

$$x = \sqrt{3} = 1.7$$


$$\begin{aligned} 2x \cdot 2x &= 2 \cdot 2 \cdot x \cdot x \\ &= \underline{\underline{4 \cdot x^2}} \end{aligned}$$




sep. 19-09.41

a) 

$a^2 + b^2 = c^2$
 $a^2 + (4,5)^2 = 9^2$
 $a^2 = 9^2 - 4,5^2$
 $a^2 = 81 - 20,25$
 $a^2 = 60,75$
 $a = \sqrt{60,75}$
 $= \underline{\underline{7,8}}$

b) 

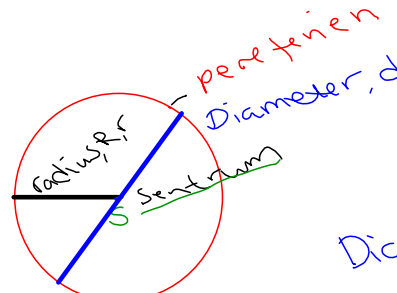
$a^2 + b^2 = c^2$
 $7^2 + 7^2 = c^2$
 $49 + 49 = c^2$
 $c^2 = 98$
 $c = \sqrt{98}$
 $= \underline{\underline{9,8}}$

c)  usannsynlig trekant

$a^2 + b^2 = c^2$
 $x^2 + 4^2 = 8^2$
 $x^2 = 8^2 - 4^2$
 $x^2 = 64 - 16$
 $x = \sqrt{48}$
 $= \underline{\underline{6,9}}$

sep. 19-09.46

Sirkelen:



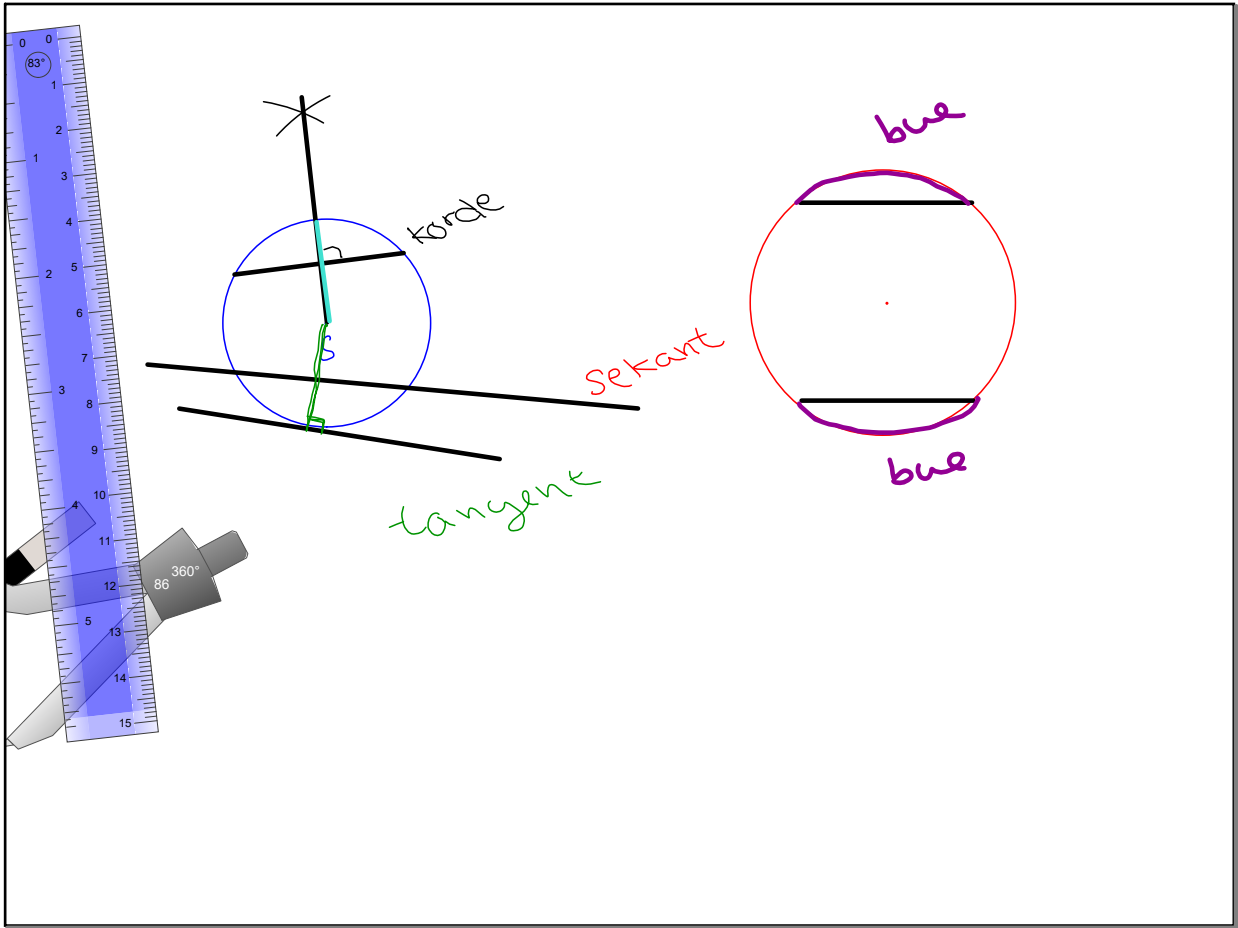
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Diameter, d

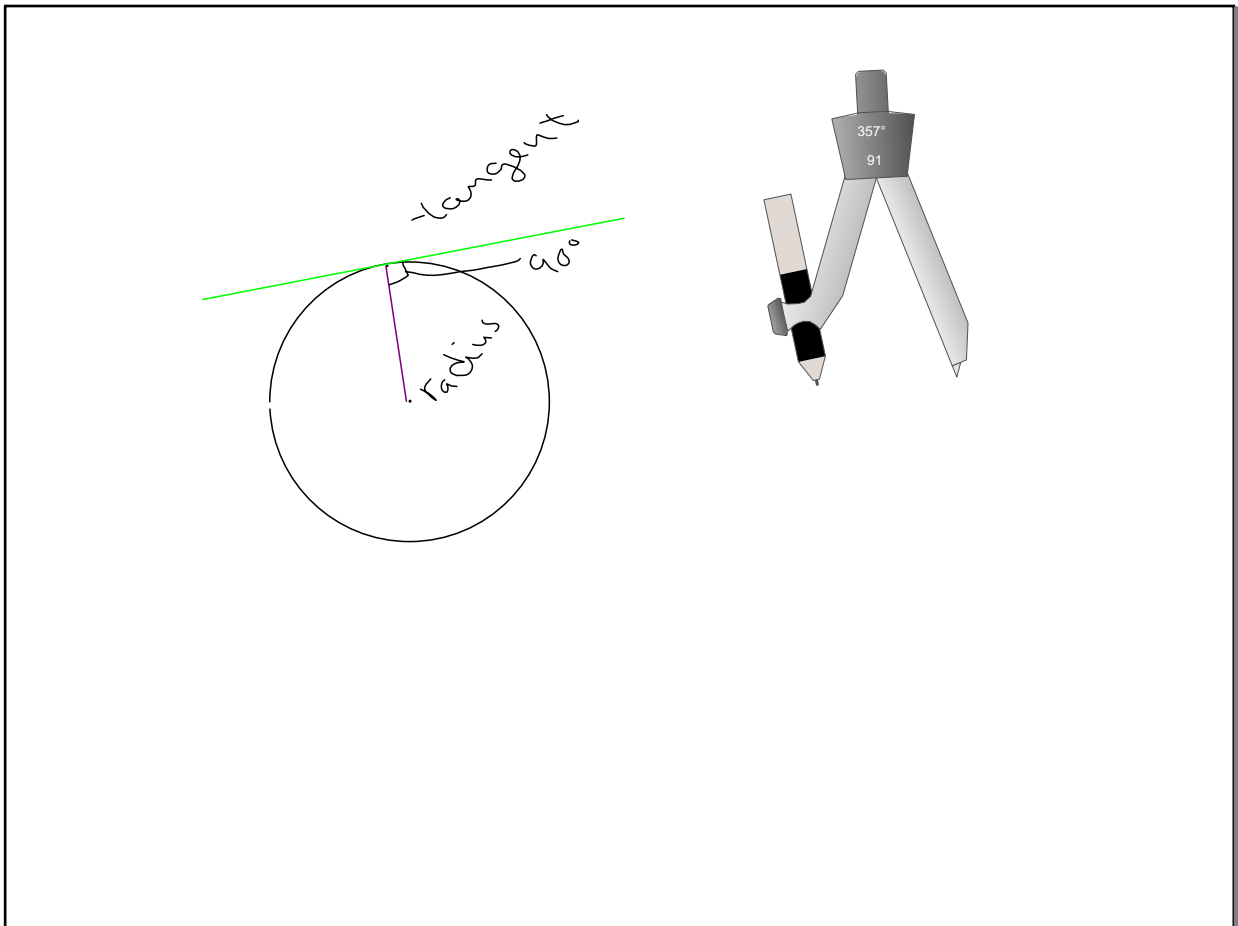
S Sentrum

$d = 2 \cdot r$
 Diameter = 2 · radius

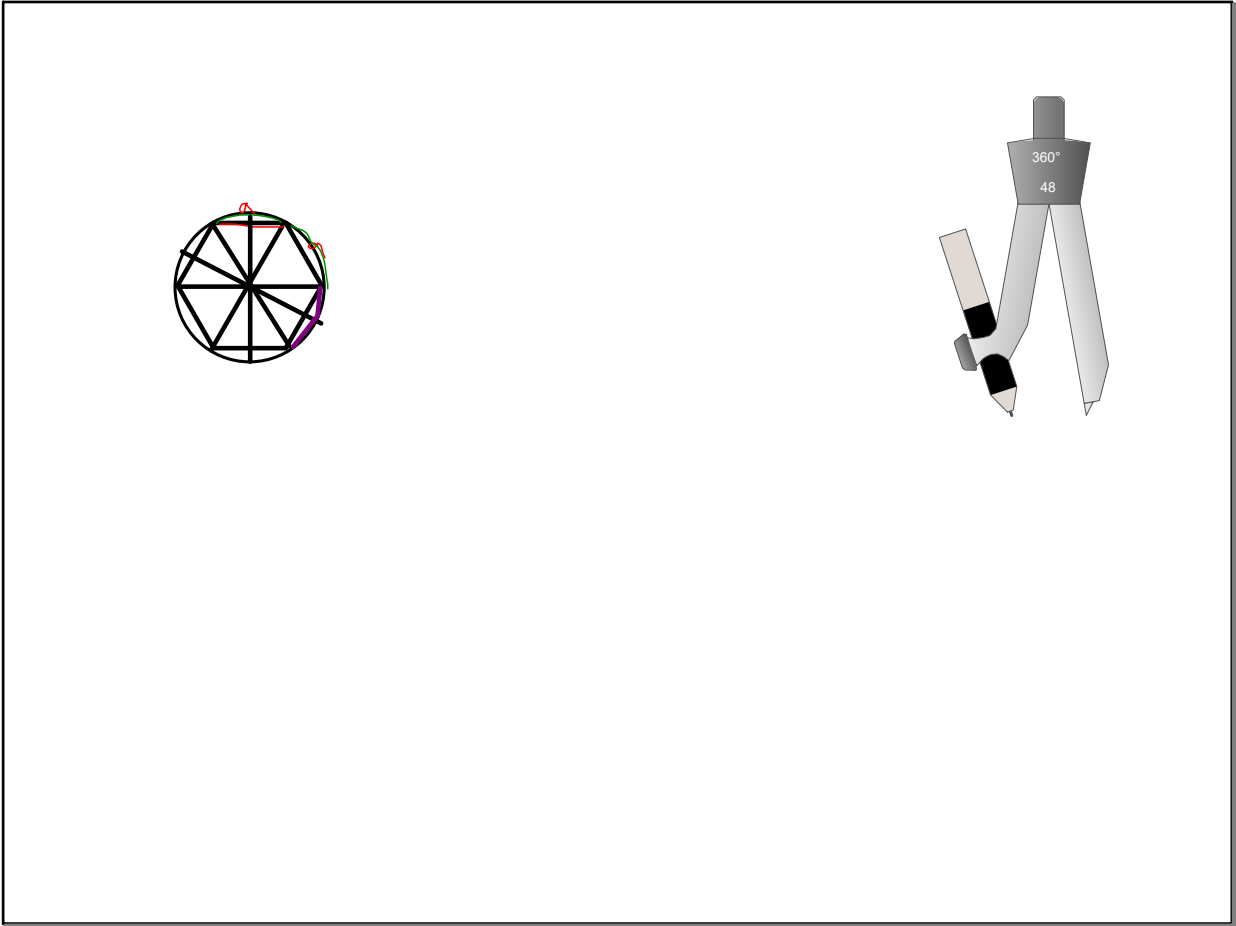
sep. 19-10.17



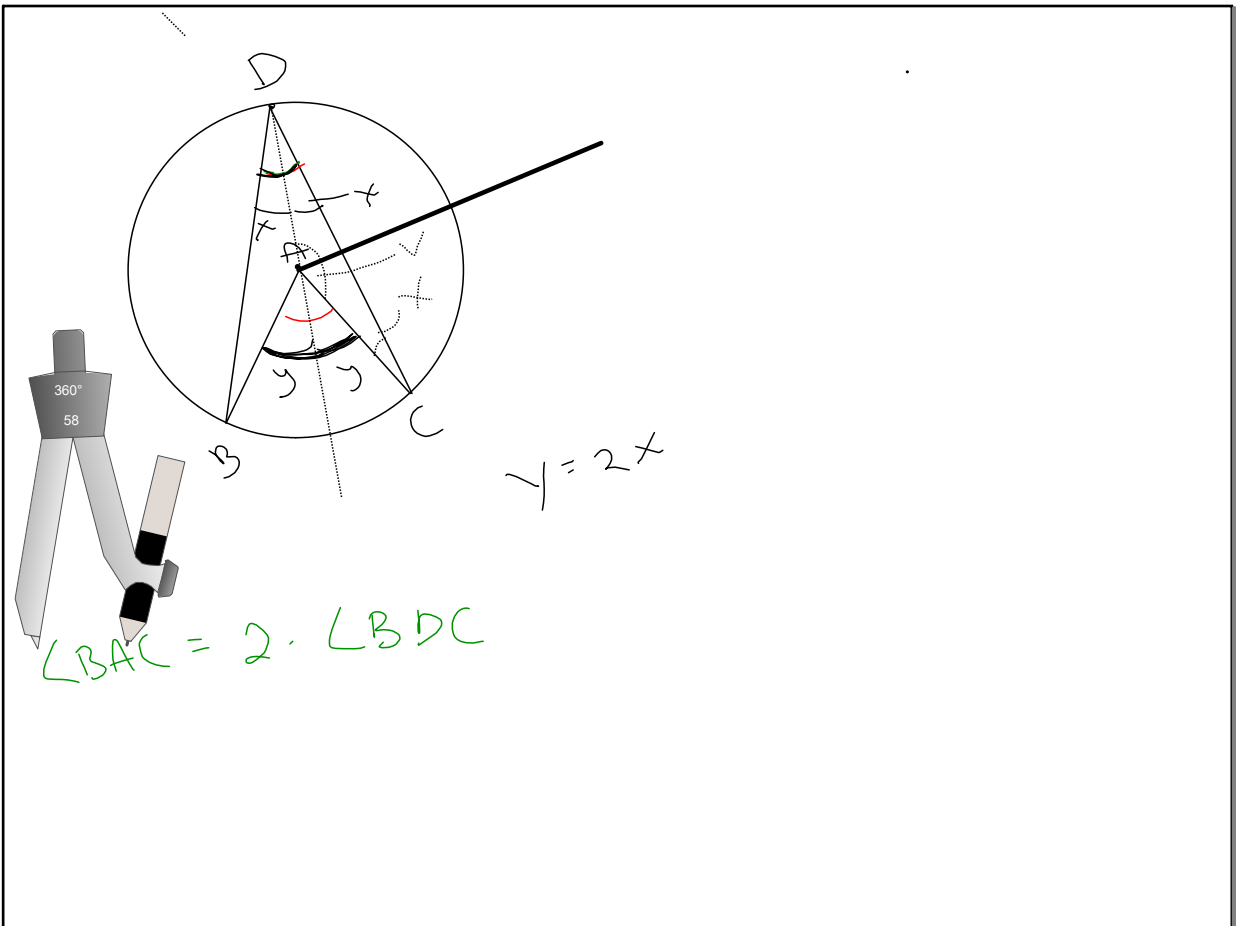
sep. 19-10.09



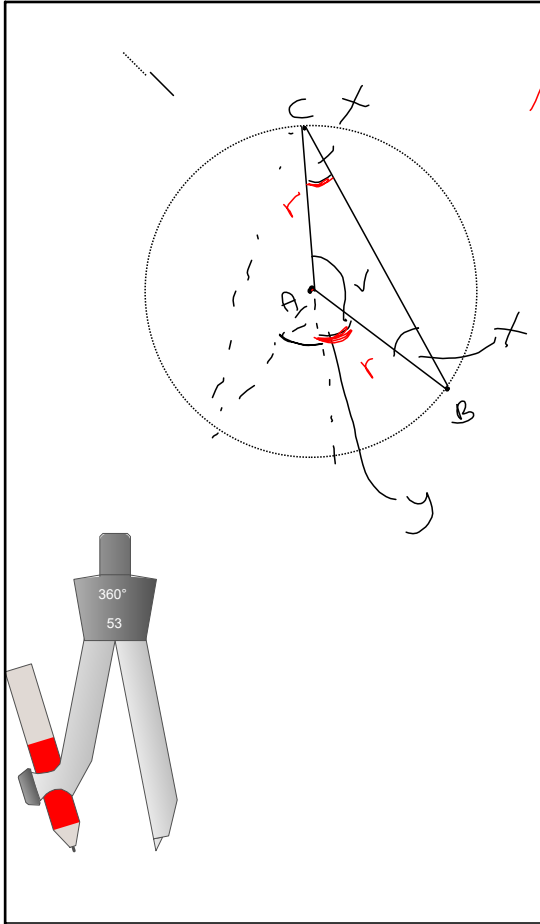
sep. 19-10.29



sep. 19-10.33



sep. 19-10.36



likebeint trekant

$$x + x + y = 180^\circ$$

$$\textcircled{2x} + y = 180^\circ$$

$$y = 180^\circ - 2x$$

$$y + y = 180$$

$$y = 180^\circ - y$$

$$= 180^\circ - (180^\circ - 2x)$$

$$= \underline{\underline{2x}}$$

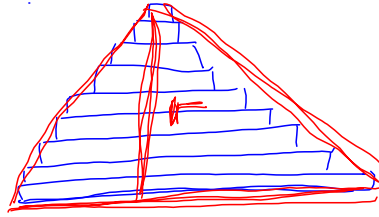
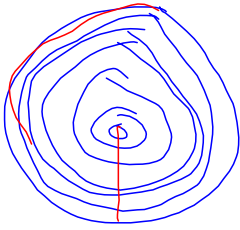
sep. 19-10.43

$\frac{2r}{d}$	O	$\frac{O}{d}$
6	18,85	3,14
3	-	3,14
2	-	3,14

Pi, π

$$\underline{\underline{O = 2\pi r \quad (\pi \cdot d)}}$$

sep. 19-10.52

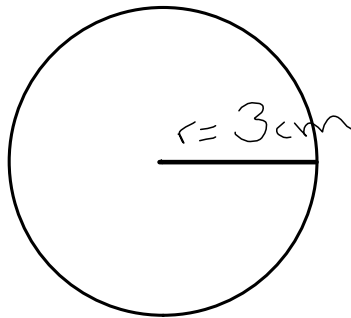


$$O = 2\pi r$$

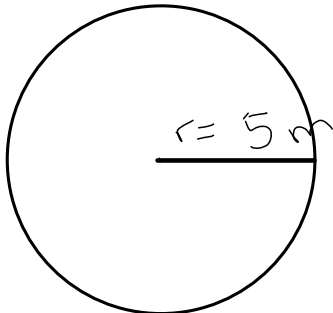
$$A = \frac{b \cdot h}{2} = \frac{2\pi r \cdot r}{2} = \underline{\underline{\pi r^2}}$$

$$\underline{\underline{A = \pi r^2}}$$

sep. 19-11.00

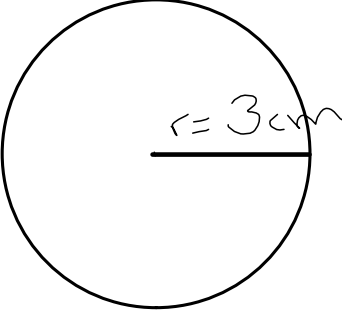


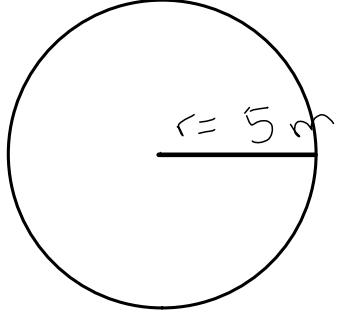
$$\begin{aligned} \text{Omkrets} \\ O &= 2 \cdot \pi \cdot r \\ &= 2 \cdot 3,14 \cdot 3 \text{ cm} \\ &= 18,85 \text{ cm} \end{aligned}$$



$$\begin{aligned} O &= 2 \cdot 3,14 \cdot 5 \text{ m} \\ &= \underline{\underline{31,4 \text{ m}}} \end{aligned}$$

sep. 19-11.04





Area $A = \pi r^2$

$$A = 3,14 \cdot \underline{3\text{cm}} \cdot \underline{3\text{cm}}$$

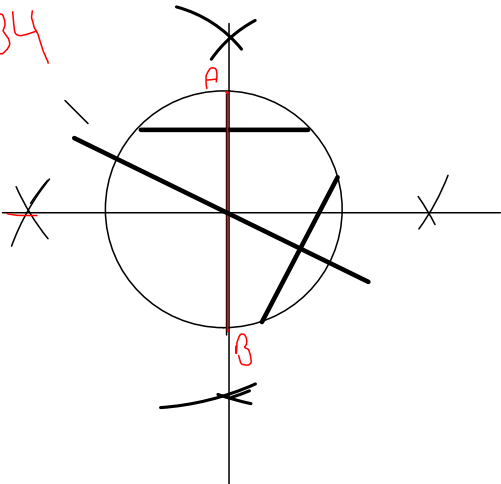
$$= 28,26 \underline{\text{cm}^2}$$

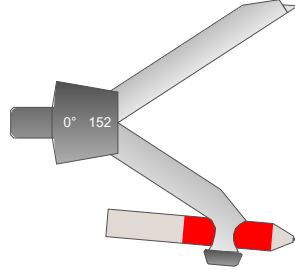
$$A = 3,14 \cdot \underline{5\text{m}} \cdot \underline{5\text{m}}$$

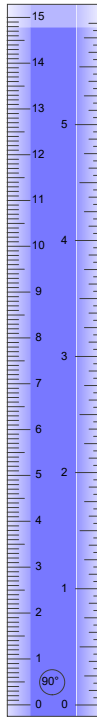
$$= 78,5 \underline{\text{m}^2}$$

sep. 19-11.04

5.34

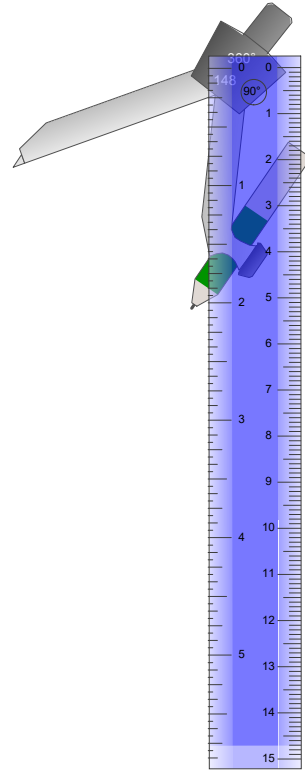
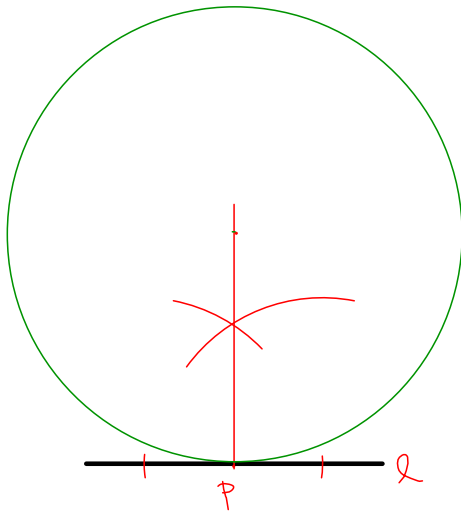






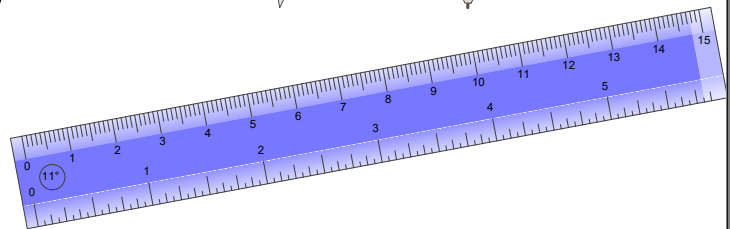
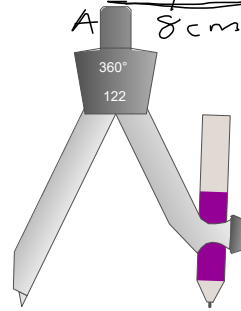
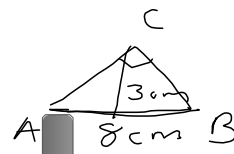
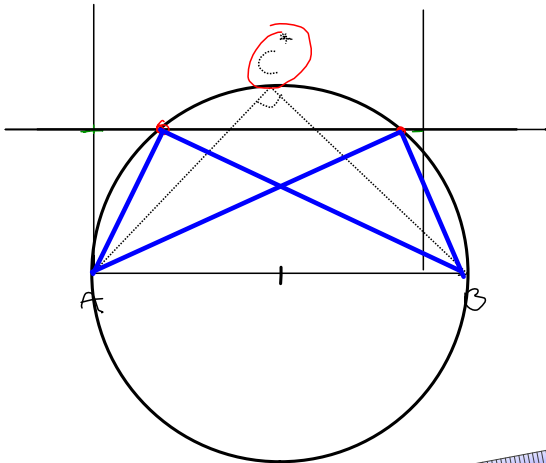
sep. 19-11.51

5.35

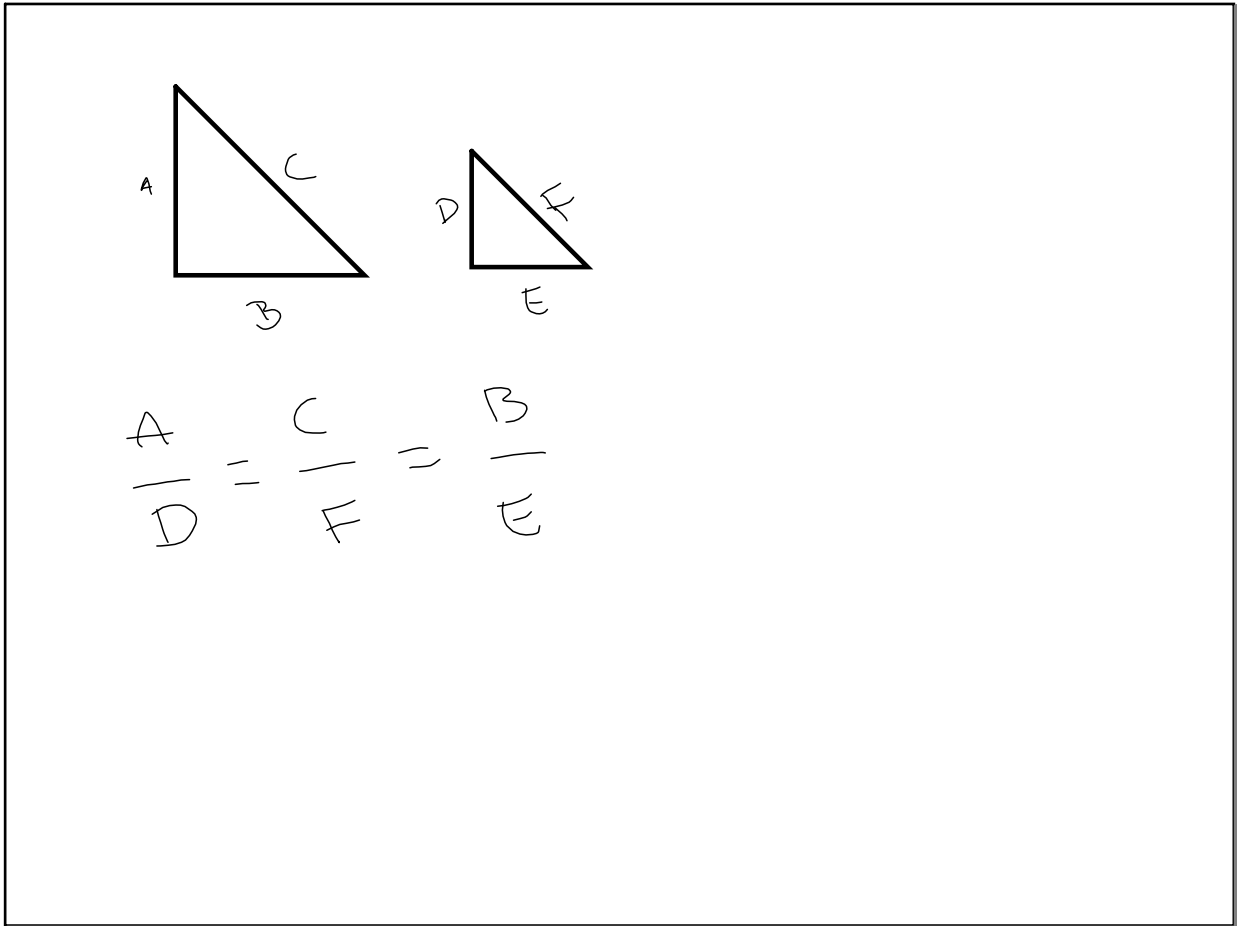


sep. 19-12.00

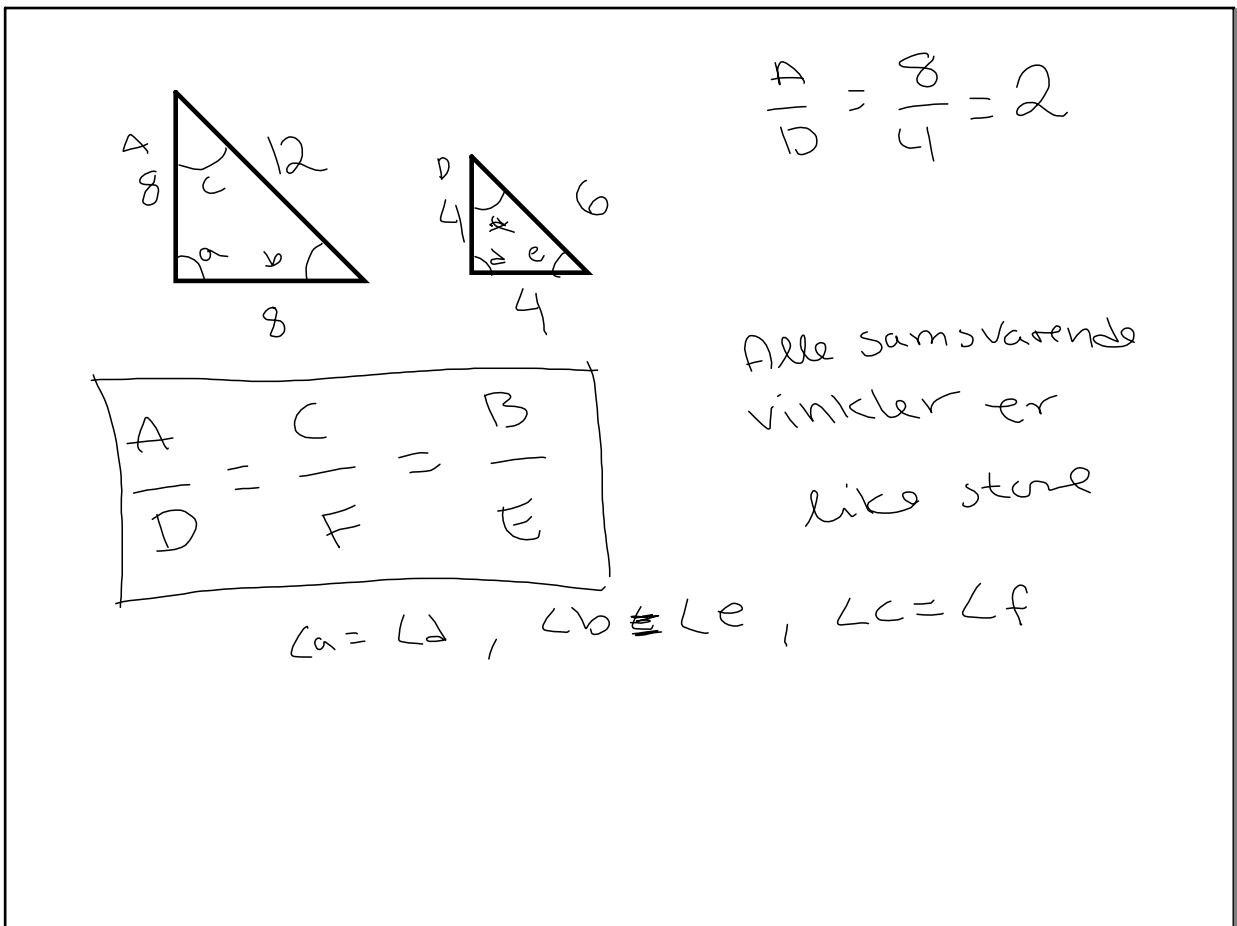
5.40



sep. 19-12.03



sep. 19-12.21



sep. 19-12.21

$\triangle ABC \cong \triangle DEF$
 $\frac{DE}{AB} = \frac{DF}{AC} \Rightarrow$
 $\frac{10}{8} = \frac{x}{10}$
 $x = \frac{10 \cdot 10}{8}$
 $x \cdot \frac{100}{8} = 125$

sep. 19-12.26

$\triangle ABC \cong \triangle DEF$
 $\frac{DE}{AB} = \frac{FE}{BC} \Rightarrow$
 $\frac{10}{8} = \frac{y}{6}$
 $y = \frac{10}{8} \cdot 6$
 $y = \frac{60}{8} = 7,5$
 1,25 for hold's tale
 $EF = 1,25 \cdot 6 = 7,5$

sep. 19-12.26

$\frac{AC}{DF} = \frac{AB}{DE}$
 $\frac{12}{8} = \frac{AB}{6}$
 $AB = \frac{12}{8} \cdot 6 = 9$

$\frac{AC}{DF} = \frac{BC}{EF}$
 $\frac{12}{8} = \frac{BC}{4}$
 $\frac{12}{8} \cdot 4 = 6$

$\frac{12}{8} = 1,5$
 $AB = 1,5 \cdot 6 = 9$
 $EF = 1,5 \cdot 4 = 6$

sep. 19-12.32

$\triangle ABC \sim \triangle CDE$
 $CD?$
 $\frac{AB}{DE} = \frac{AC}{CD}$
 $\frac{8}{5} = \frac{10 \cdot 5}{CD}$
 $CD = \frac{10 \cdot 5}{8} = \frac{50}{8} = 6,25$

sep. 19-12.37

$\triangle ABC \sim \triangle CDE$
 BC^2 og CE
 $BC^2 = 8^2 + 10^2$
 $BC = \sqrt{164}$
 $= 12,8$

$CE?$ $\frac{8}{5} = \frac{12,8}{CE} \Rightarrow CE = \frac{12,8 \cdot 5}{8} = 8$

sep. 19-12.37

$CB?$
 \hookrightarrow Pythagoras $CB^2 = AB^2 + AC^2$
 $CB^2 = 8^2 + 10^2$
 $= 64 + 100$
 $CB = \sqrt{164}$
 $= 12,8$

$CE?$ $\frac{AB}{DE} = \frac{CB}{CE} \Rightarrow CE = \frac{CB \cdot DE}{AB} = \frac{12,8 \cdot 5}{8} = 8$

sep. 19-12.44

CD?

$$\frac{AB}{DE} = \frac{AC}{CD}$$

$$\frac{7}{5} = \frac{x+3}{x}$$

$$7x = (x+3)5$$

$$7x = 5x + 15$$

$$2x = 15 \Rightarrow x = 7,5$$

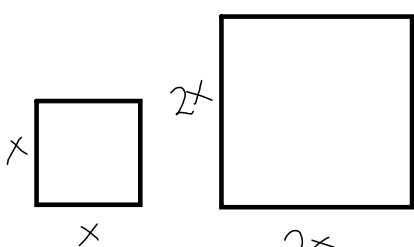
CD = 7,5

sep. 19-12.48

$A_1 = 1 \cdot 1 = 1$ $A_2 = 2 \cdot 2 = 4$

Areaet firdobles når lengdene
dobles.

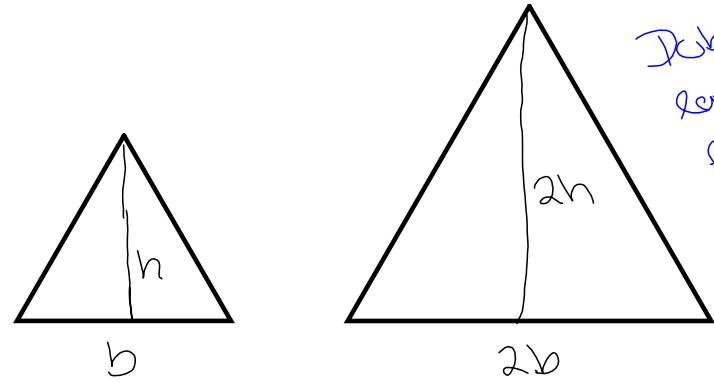
sep. 19-12.50



$A_L = x \cdot x$
 $A_S = 2x \cdot 2x$
 $= \underline{4x^2}$

Dobbling our length = firdobbling our area!

sep. 19-12.52



$A_L = \frac{b \cdot h}{2}$
 $A_S = \frac{2h \cdot 2b}{2} = \underline{4} \frac{bh}{2}$
 $A_S = 4 \cdot A_L$

Dobbling our length = firdobbling area!

sep. 19-12.53

$$\frac{AB}{DE} = \frac{CG}{FH} \rightarrow FH = \frac{CG \cdot DE}{AB}$$

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

sep. 19-12.57

$$4 \cdot 8 = 16$$

Hva er arealet til $\triangle DEF$

$$A_{ABC} = \frac{4 \cdot 2}{2} = 4 \Rightarrow A_{DEF} = 4 \cdot A_{ABC} = 4 \cdot 4 = 16$$

sep. 19-12.57



sep. 19-12.25