1P, Vår 20, del 1

1) $AC = \sqrt{81\,dm^2} = 9\,dm$

Areal store kvadrat $= (BC)^2 = (AB)^2 + (AC)^2 = (12\,dm)^2 + (9\,dm)^2$

$= 144\,dm^2 + 81\,dm^2 = 225\,dm^2$

2) Pris uten mva $= \frac{230\,kr}{1{,}15} = \frac{23000\,kr}{115} = 200\,kr$

Merverdiavgift $= (230 - 200)\,kr = 30\,kr$

3) Målestokk $= \frac{5\,cm}{2{,}5\,km} = \frac{2{,}5\,cm}{2{,}5 \cdot 1000 \cdot 100\,cm} = \frac{2}{100000}$

$= \frac{1}{50000} \Rightarrow M: 1:50000$

4) Formlikhet $\Rightarrow \frac{DB}{AB} = \frac{DE}{AC}$

$DB = \frac{DE \cdot AB}{AC} = \frac{6m \cdot 15m}{10m} = \frac{90m}{10} = 9m$

5) $\frac{R}{K} = \frac{3}{4}$

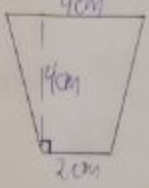
Rode $= \frac{3}{7} \cdot 28 = 12$ dk

6) a) Areal, $A = \frac{(a+b)\cdot h}{2} = 12\,cm^2$

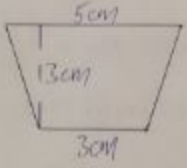
1) sett $a = 2cm$, $b = 4cm$, $h = 4cm$ $\Rightarrow A = \frac{(2+4)cm \cdot 4cm}{2} = \underline{12cm^2}$

2) sett $a = 3cm$, $b = 5cm$, $h = 3cm$ $\Rightarrow A = \frac{(3+5)cm \cdot 3cm}{2} = \underline{12cm^2}$

1)



2)



b) $A = \frac{(a+b)\cdot h}{2} = \frac{s \cdot h}{2} \Rightarrow \underline{s \cdot h = 2A = konstant}$

$\Rightarrow$ <u>s og h er omvendt proporsjonale størrelser</u>

7) $\underline{P(24) + P(42)} = \frac{1}{10} \cdot \frac{1}{10} + \frac{1}{10} \cdot \frac{1}{10} = \frac{2}{100} = \underline{\frac{1}{50}}$

8) $\underline{Nordkapp(2017)} = 1000000kr \cdot \frac{1055}{100} = \underline{1055000kr}$

9) $\underline{Omkretsen} \approx 3 \cdot s + \frac{2\pi r}{2} = 3 \cdot s + \pi r$

$= 3 \cdot 14\,dm + \frac{22}{7} \cdot 7\,dm = (42+22)\,dm = \underline{64\,dm}$

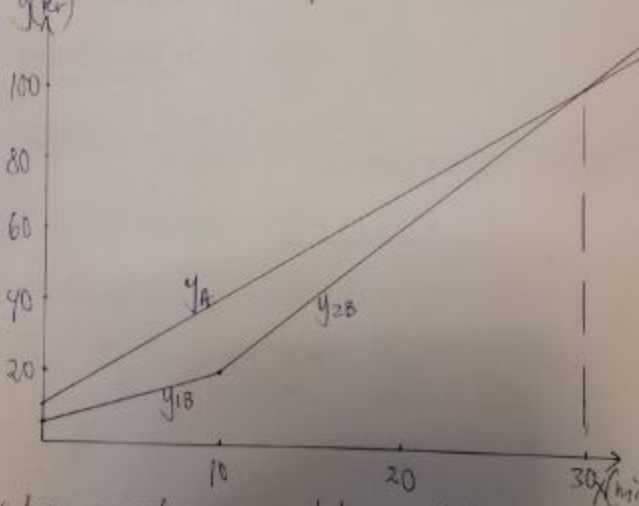
10) A: $y_A = 3x + 10 \quad x \geq 0$

a) B: $y_{1B} = 1{,}50x + 5 \quad 0 \leq x \leq 10$

$y_B(10) = 1{,}50 \cdot 10 + 5 = 20$

Deretter stigning på 4 kr./min

Gir denne grafiske fremstillingen:



b) Vi leser av grafen og ser at hun må bruke sykkelen minst 30 minutter for at firma A skal være rimeligst

Kontroll:

A: $3 \cdot 30 + 10 = 90 + 10 = \underline{100 \text{ kr}}$

B: $1{,}50 \cdot 10 + 5 + 20 \cdot 4 = 15 + 5 + 80 = \underline{100 \text{ kr}}$