

Oppgave 1

a) Familiebillett: 350kr

2 barn =	$70\text{kr} \cdot 2 = 140\text{kr}$
1 voksen =	140kr
1 honør =	<u>120kr</u>
	<u>400kr</u>

$$400\text{kr} - 350\text{kr} = \underline{50\text{kr}}$$

De sparer 50kr ved å kjøpe familiebillett.

b) Voksen i skisimulator : $\frac{95\text{kr}}{5\text{min}} = 19\text{kr/minutt}$

Barn i skisimulator : $\frac{55\text{kr}}{5\text{min}} = 11\text{kr/min}$

> diff 8kr/min

En voksen må betale 8kr mer per min enn barn

Oppgave 2

a) $K = (F + 460) \cdot \frac{5}{9}$

$$K = (212 + 460) \cdot \frac{5}{9}$$

$$K = \frac{672 \cdot 5}{9}$$

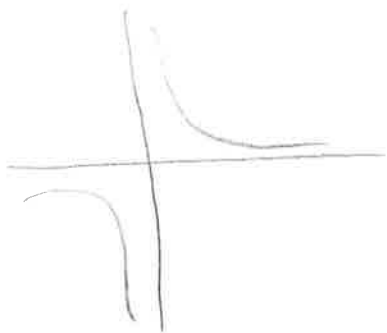
$$K = 373,333 \approx \underline{\underline{373}}$$

b) $K = \frac{(F + 460) \cdot 5}{9}$

$$\frac{5 \cdot K}{9} = F + 460$$

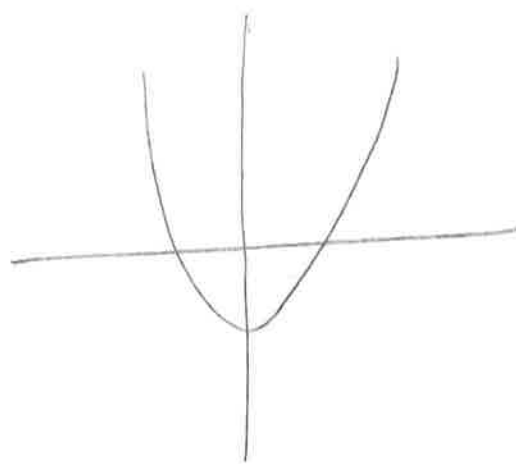
$$\underline{\underline{\frac{5}{9}K - 460 = F}}$$

Oppgave 3



Omvendt proporsjonal funksjon

$$f(x) = \frac{k}{x}$$



Andregradsfunksjon = $f(x) = x^2 + k$

Oppgave 4

$$2 \text{ timer} \cdot 2 \text{ dager} = 4 \text{ timer}$$

$$4 \text{ timer} \cdot 3 \text{ uker} = 12 \text{ timer}$$

$$\frac{2268 \text{ kr}}{12 \text{ t}} = \underline{\underline{189 \text{ kr/t}}}$$

Timelønnen til Sindre var 189 kr/t

Oppgave 5

$$\frac{1}{6} \text{ rolig tempo} + \frac{2}{5} \text{ høyt tempo} + \frac{3}{10} \text{ rolig tempo}$$

$$\frac{1 \cdot 5}{6 \cdot 5} + \frac{2 \cdot 6}{5 \cdot 6} + \frac{3 \cdot 3}{10 \cdot 3} = \frac{5 + 12 + 9}{30} = \frac{26}{30}$$

$$5,2 \text{ km} = \frac{4}{30}$$

$$\frac{1}{30} = 1,3 \text{ km}$$

$$1,3 \text{ km} \cdot 30 = \underline{\underline{39 \text{ km}}}$$

Turen er 39 km til sammen

Oppgave 6

II

$$a) \frac{6400 \text{ hr}}{2} = 3200 \text{ hr}$$

$$\text{Eldste ungdommer jobbet: } \frac{3200 \text{ hr}}{100 \text{ hr/t}} = 32 \text{ t}$$

$$\text{Yngste ungdommeres jobbet: } \frac{3200 \text{ hr}}{50 \text{ hr/t}} = 64 \text{ t}$$

$$\text{Totalt jobbet de: } 32 \text{ t} + 64 \text{ t} = \underline{\underline{96 \text{ t}}}$$

b)

$$\frac{2400 \text{ hr}}{96 \text{ t}} = 25 \text{ hr/t}$$

$$50 \text{ hr/t} + 25 \text{ hr/t} = 75 \text{ hr/t}$$

De yngste fikk da 75 hr/t

Oppgave 7

a) Se worddokument

b) $\angle B = 45^\circ$ siden $\angle C$ blir bestemt av midtnormal på AB. Da dannes det en likesidet trekant \rightarrow
 $\angle A$ og $\angle B = 45^\circ$

$$c) 180^\circ - 90^\circ = \underline{\underline{90^\circ}} \rightarrow \underline{\underline{\angle C}}$$

$$d) x^2 + x^2 = 8^2$$

$$\frac{2x^2}{2} = \frac{64}{2}$$

$$\sqrt{x^2} = \sqrt{32}$$

$$\underline{\underline{x = 5,65 \approx 5,7}}$$



Oppgave 8

$$3x + x = 48$$

$$\frac{4x}{4} = \frac{48}{4}$$

$$x = 12$$

$$12 \cdot 3 = 36$$

Hva solgte 36 juletre

Oppgave 9

$$a) \frac{36000kr}{5} = 7200kr$$

Han betaler 7200kr i skatt

$$b) \frac{1 \cdot 9}{4 \cdot 9} + \frac{2 \cdot 9}{9 \cdot 4} = \frac{9+8}{36} = \frac{17}{36}$$

$$\frac{36}{36} - \frac{17}{36} = \frac{19}{36}$$

Hun har $\frac{19}{36}$ igjen av lønna

$$c) \text{Petter husleie: } \frac{36000 \cdot 4}{15} = \underline{\underline{9600kr}}$$

$$\frac{2}{9} = 9600kr \rightarrow \frac{1}{9} = 4800kr$$

$$4800kr \cdot 9 = \underline{\underline{43200kr}}$$

Selma tjener 43200kr i måneden

Oppgave 10

III

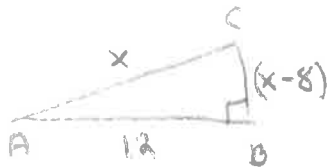
$$73kr - 25kr = 48kr$$

$$\frac{48kr}{3} = 16kr$$

Ett skolebrød koster 16 kr

Oppgave 11

Helpfigur:



$$K_1^2 + K_2^2 = h^2$$

$$12^2 + (x-8)^2 = x^2$$

$$144 + x^2 - 16x + 64 = x^2$$

$$144 + 64 = x^2 - x^2 + 16x$$

$$\frac{208}{16} = \frac{16x}{16}$$

$$13 = x$$

$$BC = 13 - 8 = \underline{\underline{5cm}}$$

Oppgave 12

$$\frac{2.2 \cdot 10^5 \text{ tonn}}{4.6 \text{ millioner}} = \frac{220000000 \text{ kg}}{4600000} = \underline{\underline{47.8 \text{ kg}}}$$

Det blir 47.8 kg forsik på hver nordmann

Oppgave 13

GeoGebra - se worddokument

Oppgave 14

Excel - se worddokument