

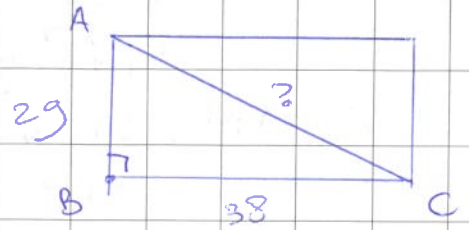
Naam: Ditwits Pythagoras

Cijfer:

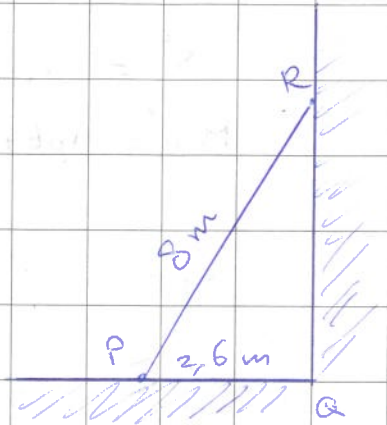
Vak: _____

Datum: _____ Klas: _____

① $AC^2 = 29^2 + 38^2 =$
 $841 + 1444 = 2285$
 $AC = \sqrt{2285} \approx 48 \text{ cm}$



② $8^2 = 2,6^2 + QR^2$
 $64 = 6,76 + QR^2$
 $QR^2 = 64 - 6,76 = 57,24$
 $QR = \sqrt{57,24} \approx 7,6 \text{ m}$



③ A(3,2)
 B(7,1)

Als je van A naar B loopt neemt de toe met $7-3=4$

en y neemt af met 1.

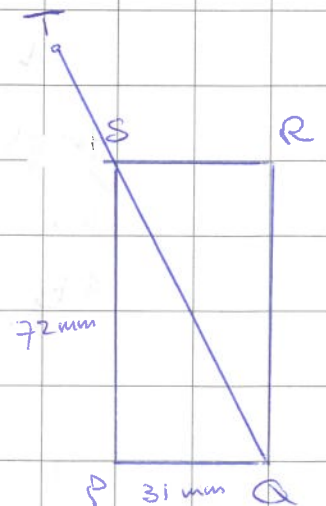
$AB^2 = 4^2 + 1^2 =$

$16 + 1 = 17$

$AB = \sqrt{17} \approx 4,12$



④ $QS^2 = 31^2 + 72^2 = 6145$
 $QS = \sqrt{6145} = 78,39... \text{ mm}$
 Hele metje = $127,3 \text{ mm}$
 $TS = 127 - 78,39... = 48,60... \text{ mm}$
 $TS \approx 49 \text{ mm}$



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$$AC^2 = AB^2 + BC^2 = 67^2 + 67^2 = 8978$$

$$AC = \sqrt{8978} = \sqrt{67^2 \cdot 2} = 67\sqrt{2} = 94,75\dots$$

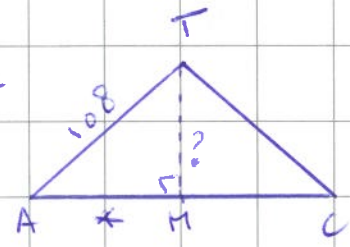
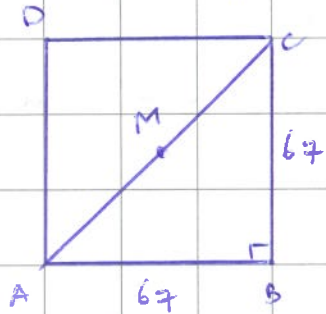
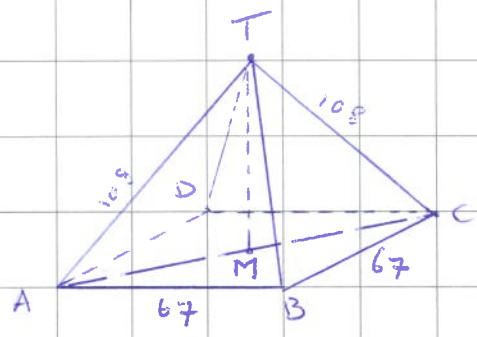
$$AM = 33\frac{1}{2}\sqrt{2} = 47,37\dots$$

$$AT^2 = AM^2 + MT^2$$

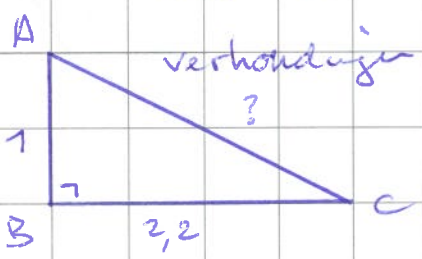
$$108^2 = 47,37\dots^2 + MT^2$$

$$MT^2 = 11664 - 2244,5 = 9419,5$$

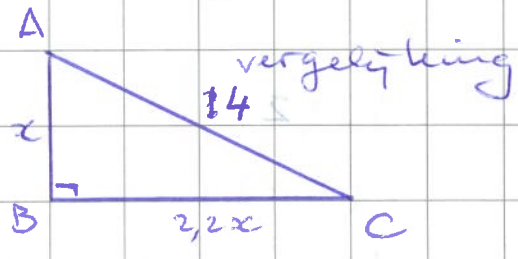
$$MT = \sqrt{9419,5} = 97,05\dots \approx 97 \text{ m}$$



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of



$$AC^2 = 1^2 + 2,2^2 = 5,84$$

$$AC = \sqrt{5,84}$$

$$x^2 + (2,2x)^2 = 14^2$$

$$x^2 + 4,84x^2 = 196$$

$$5,84x^2 = 196$$

$$x^2 = 33,56\dots$$

$$x = \sqrt{33,56\dots} \approx 5,8 \text{ m}$$

verh.	AB 1	BC 2,2	AC $\sqrt{5,84}$
length	?		14

$$k = 14 : \sqrt{5,84} = 5,79\dots$$

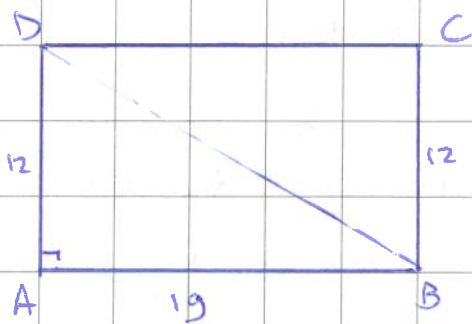
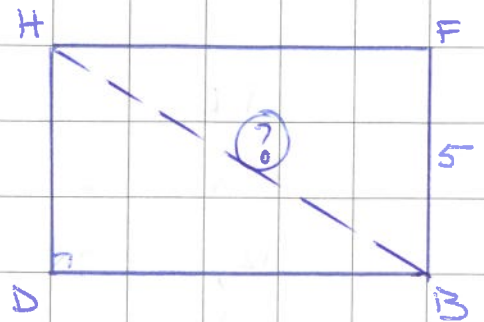
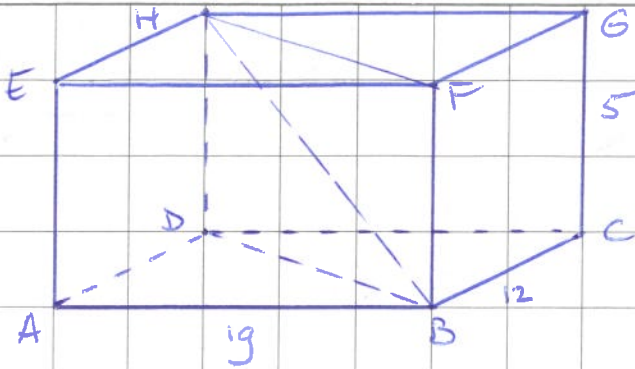
$$AB = 1 \cdot 5,79\dots \approx 5,8 \text{ m}$$

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$$BD^2 = AB^2 + AD^2 = 19^2 + 12^2 = 505$$

$$BD = \sqrt{505}$$

$$HB^2 = BD^2 + DH^2 = 505 + 5^2 = 530$$

lichaamsdiagonaal = $HB = \sqrt{530} = 23,02... \approx 23,0$

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$$AF^2 = AB^2 + BF^2 = 7^2 + 7^2 = 98$$

$$AF = \sqrt{98}$$

$$AC = \sqrt{98}, CF = \sqrt{98}$$

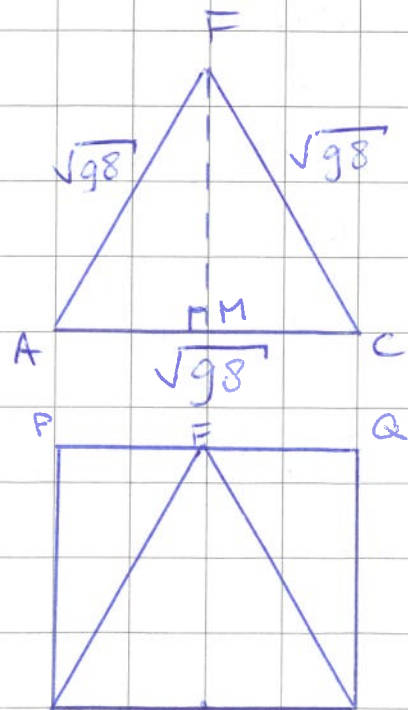
$$AM = \sqrt{98} : 2 = 4,94...$$

$$98 = (4,94...) ^2 + FM^2$$

$$FM^2 = 98 - 24,5 = 73,5$$

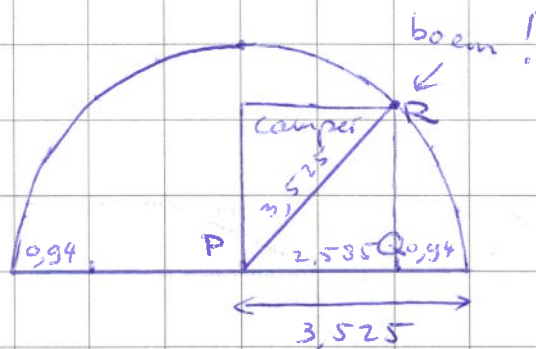
$$FM = \sqrt{73,5} = 8,57...$$

$$Opp \Delta ACF = \sqrt{98} \cdot 8,57... : 2 \approx 42,4$$



⑨

straal = $7,05 \cdot 2 = 3,525 \text{ m}$
 breedte camper = $3,525 - 0,94$
 $= 2,585 \text{ m}$



$$PR^2 = PQ^2 + QR^2$$

$$3,525^2 = 2,585^2 + QR^2$$

$$12,425625 = 6,682225 + QR^2$$

$$QR^2 = 5,7434$$

$$QR = \sqrt{5,7434} \approx 2,396\dots$$

De maximale hoogte is ~~2,40~~ m,
 eigenlijk 2,39 m want bij 2,40 m
 zit je boven de 2,396... m dus
 dan botst de camper tegen het plafond.

⑩

$KL = 3,3 \text{ cm}$
 $LM = 2 \cdot 3,3 = 6,6 \text{ cm}$

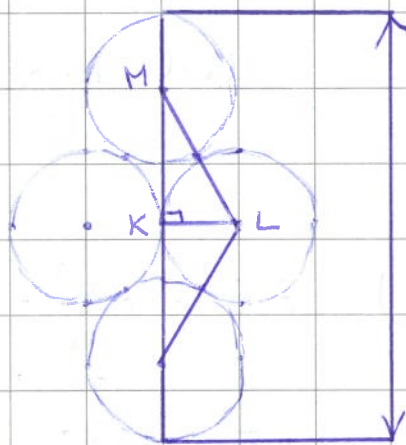
$$KL^2 + KM^2 = LM^2$$

$$3,3^2 + KM^2 = 6,6^2$$

$$10,89 + KM^2 = 43,56$$

$$KM^2 = 43,56 - 10,89 = 32,67$$

$$KM = \sqrt{32,67} = 5,715\dots$$



Totale hoogte = $3,3 + 5,715\dots + 5,715\dots + 3,3 =$
 $18,031\dots \approx 18,0 \text{ cm}$