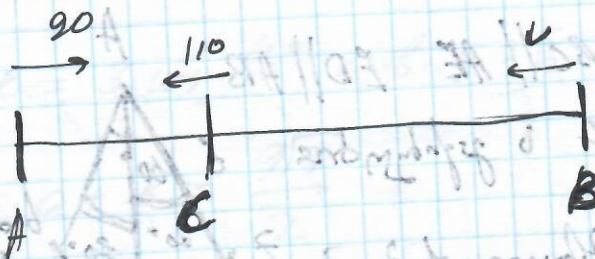


№ 1



$$a = \frac{110 - 90}{5} = 4 \frac{5^2}{10^2}$$

$$v = 90 + 4 \cdot 3 = 102$$

$$s_{AB} = 90 \cdot 3 + \frac{4 \cdot 3^2}{2} = 288$$

$$s_{BC} = 102 \cdot 2 + \frac{4 \cdot 2^2}{2} = 212$$

$$s_{AC} = s_{AB} - s_{BC} = 76$$

$$s = vt + \frac{at^2}{2}$$

$$v_0 = 90$$

$$s_{AB} = v_0 t_1 + \frac{at_1^2}{2}$$

$$t_1 = 3$$

$$v = v_0 + at$$

$$s_{BC} = v t_2 + \frac{at_2^2}{2}$$

$$t_2 = 2$$

+

+

+

+

7

$$\sqrt{2} \quad BC \parallel AE \quad ED \parallel AB$$

FD for BL is psychodynamic

ճառարձ Եկեղեցու շինություն. 7

$$BA' = AE = 7$$

AE - 2, 2/10/2019

$$\angle KAB = AB - 6 \text{ ppm}$$

$$= 360 - 120 - 120 - 90^\circ = 30^\circ$$

$$AO \equiv a \quad OK \equiv b$$

$$\angle OBA = 60^\circ \Rightarrow \angle OBC = 60^\circ$$

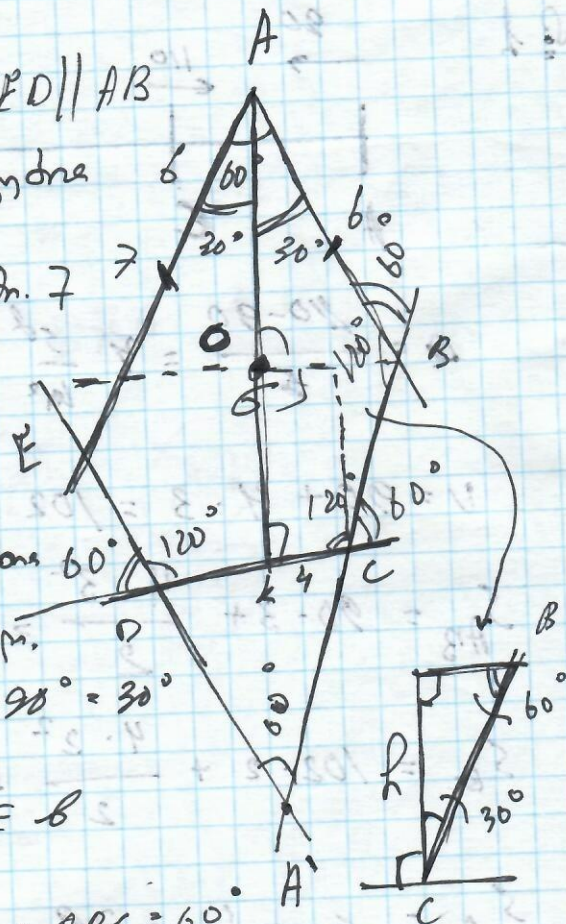
$$\therefore kOB = 300 - 120 - 60 - 90 = 90^\circ$$

$$a = 6 \cos 30 = \frac{6\sqrt{3}}{2}$$

$$\angle A'CD = 60^\circ \quad \angle DA'C = 60^\circ$$

$$DA'CD \text{ (parallelogram)} \Rightarrow A'C = 4$$

$$AB = 7 \quad BC = AB - A'C = 3$$



$$h = OK = 3 \cos 30^\circ = b = \frac{3\sqrt{3}}{2}$$

$$HK = a + b = \frac{9\sqrt{3}}{2}$$

7

№ 3

$$+ \frac{(a^{2018} + b^{2018})^{2019}}{\left(\left(\frac{a}{b}\right)^{2018} + 1\right)^{2019}} > \frac{(a^{2019} + b^{2019})^{2018}}{\left(\left(\frac{a}{b}\right)^{2019} + 1\right)^{2018}}$$

$$\frac{a}{b} = \alpha \quad \left(\alpha^{2018} + 1\right)^{2019} > \left(\alpha^{2019} + 1\right)^{2018}$$

any $0 < \alpha < 1$ - Monotone beats

$$\alpha^{2018} > \alpha^{2019}$$

$$\alpha^{2018} + 1 > \alpha^{2019} + 1$$

$$(\alpha^{2018} + 1)^{2018} > (\alpha^{2019} + 1)^{2018}$$

$$+ \quad \uparrow$$

$$(\alpha^{2018} + 1) \mid (\alpha^{2018} + 1)^{2018} > (\alpha^{2019} + 1)^{2018}$$

hence $\alpha^{2018} + 1 > 1$

any $d \geq 1$

$$(d^{2018} + 1)^{2018} / (d^{2018} + 1) > (d^{2019} + 1)^{2018}$$

$$(d^{2018} + 1)^{2018} d^{2018} + (d^{2018} + 1)^{2018} > (d^{2019} + 1)^{2018}$$

$$(d^{2019} + d)^{2018} + (d^{2018} + 1)^{2018} > (d^{2019} + 1)^{2018}$$

h. p. g.

~~7~~ ~~7~~ 6

$$2FS + nS - 1 - nS + nS + nS = (1+n)$$

$$0 < 4FS + nS - 1 - nS$$

$$4FS - nS - 1 - nS < (1+n)$$

h. p. g.

№5

$$n^3 + 13n - 273 = a^3$$

$$n^3 + 13n - 273 > 0$$

+

$$\begin{array}{c} \Downarrow \\ n > 5 \end{array} \quad \text{хэрхэл } n \in \mathbb{N}$$

$$\Downarrow \\ n - 5 > 0$$

ум $a - 6$ эхлэх ёстойг харах $n - 5 - 87$

$$(n+1)^3 = n^3 + 3n^2 + 3n + 1$$

$$\cancel{n^3} + 3n^2 + 3n + 1 - \cancel{n^3} - 13n + 273 \\ 3n^2 - 10n + 274$$

$$D < 0$$

$$\Downarrow \\ 3n^2 - 10n + 274 > 0$$

$$\Downarrow \\ (n+1)^3 > n^3 + 13n - 273$$

$a - 6$ хэрхэлх ёстойг харах 120

Знайти суму чисел $n, n-1, n-2, n-3, n-4, n-5$

$$n^3 + 13n - 273 = n^3$$

$$\boxed{n = 21}$$

$$n^3 + 13n - 273 = n^3 - 3n^2 + 3n - 1$$

$$3n^2 + 10n - 272 = 0$$

$$D = 3364$$

$$\boxed{n = 8}$$

$$n^3 + 13n - 273 = n^3 - 6n^2 + 12n - 8$$

$$6n^2 + n + 265 = 0$$

$$D = 79,75$$

$$(n-3)^3$$

$$n^3 + 13n - 273 = n^3 - 9n^2 + 27n - 27$$

$$9n^2 - 14n - 246$$

$$D = 95,14$$

$$(n-4)^3$$

$$n^3 + 13n - 273 = n^3 - 12n^2 + 48n - 64$$

$$12n^2 - 35n - 209 = 0$$

$$D = 106,01$$

Знайти суму чисел $n=8$

$$21 + 8 = 29$$

$$n = 21$$

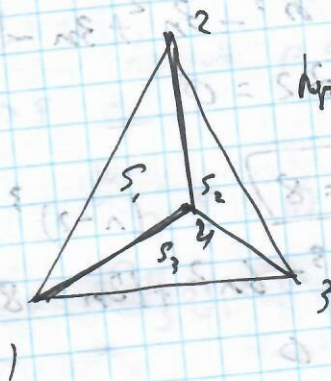
+

№ 4

any 3 հիպոթենուզի միջև կապը - անցի

+

սրահից 4-ի հիպոթենուզի միջև կապը



հիպոթենուզի $S_1 > 2$

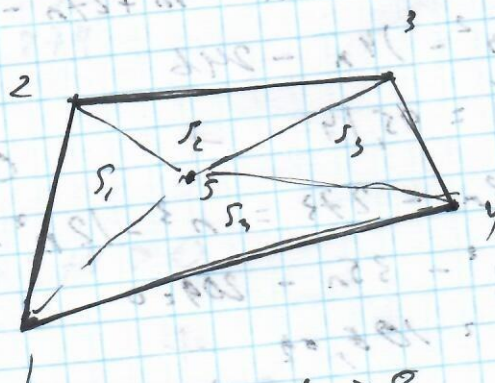
$S_2 > 2$

$S_3 > 2$

$S_1 + S_2 + S_3 > 6$

+

սրահի միջև կապը չենք հաշվում 4-ի հիպոթենուզի միջև կապը չենք հաշվում



$S_1 > 2$

$S_2 > 2$

$S_3 > 2$

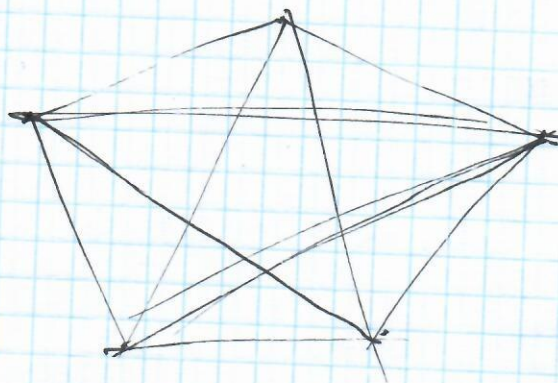
$S_4 > 2$

$S_1 + S_2 + S_3 + S_4 > 8$

սրահի միջև կապը չենք հաշվում

händyn dyl ^{Witzgebeyren} 3 - 8, dypn geharn dyl.

styppeb gedendepn hylly vdm dyl typn brayyalyrard
 gehndn stpbyd ~~styp~~ dyl jshndydn, hnd dypnwyr +
 2 blyr dyl, hnd dyl rasy dymngn pnd vdrndn.



② ①