

$$\begin{cases} 3y + ax = 1 \\ ay + 3x = -1 \end{cases}$$

$$a \neq \pm 3$$

$$\frac{3}{a} \neq \frac{a}{3} \rightarrow 9 \neq a^2 \rightarrow \boxed{a \neq \pm 3}$$

$$a \neq \pm 3 :$$

$$\begin{cases} 3y + ax = 1 \quad / \cdot a \\ ay + 3x = -1 \cdot (-3) \end{cases}$$

$$+ \begin{cases} 3ay + a^2x = a \\ -3ay - 9x = 3 \end{cases}$$

$$\Leftrightarrow (a^2 - 9)x = a + 3$$

$$\Leftrightarrow \boxed{(a+3)(a-3)x = a+3}$$

$$. a \neq \pm 3 :$$

$$x = \frac{1}{a-3}$$

$$3y + a \cdot \frac{1}{a-3} = 1$$

$$3y = 1 - \frac{a}{a-3}$$

$$3y = \frac{a-3-a}{a-3}$$

$$3y = \frac{-3}{a-3}$$

$$y = \frac{1}{3-a}$$

$$\boxed{\left(\frac{1}{a-3}, \frac{1}{3-a}\right), \quad a \neq \pm 3}$$

y -

$$. y = -3$$

$$(1) \frac{1}{a-3} > 0 \quad \cap \quad (2) \frac{1}{3-a} > -3$$

$$(1) \frac{1}{a-3} > 0$$

$$a-3 > 0$$

$$\boxed{a > 3}$$

$$(2) \frac{1}{3-a} > -3$$

$$\frac{1}{3-a} + 3 > 0$$

$$\frac{1+9-3a}{3-a} > 0$$

$$\frac{10-3a}{3-a} > 0$$

$$, (a > 3) \quad (1)$$

$$10-3a < 0$$

$$-3a < -10 \quad /: (-3)$$

$$\boxed{a > 3\frac{1}{3}}$$

.

$$, a \neq \pm 3$$

$$. a > 3\frac{1}{3} :$$

II	I	
5.75	3	$a_1$
-0.3	0.2	$d$
$n$	$n+1$	$n$

, B A ,

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$$S_n = \frac{n}{2}(2a_1 + d(n-1))$$

$$\begin{aligned} \frac{n+1}{2}(2 \cdot 3 + 0.2 \cdot (n+1-1)) &= \frac{n}{2}(2 \cdot 5.75 - 0.3 \cdot (n-1)) \\ \Leftrightarrow \frac{n+1}{2}(6 + 0.2n) &= \frac{n}{2}(11.5 - 0.3n + 0.3) \quad / \cdot 2 \\ \Leftrightarrow (n+1)(6 + 0.2n) &= n(11.8 - 0.3n) \\ \Leftrightarrow 6n + 0.2n^2 + 6 + 0.2n &= 11.8n - 0.3n^2 \\ \Leftrightarrow 0.5n^2 - 5.6n + 6 &= 0 \\ \Leftrightarrow n_{1,2} &= \frac{5.6 \pm 4.4}{1} \\ \Leftrightarrow \boxed{n_1 = 10} \quad \cancel{n_2 = 1.2} \end{aligned}$$

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$$\begin{aligned} S_{10} &= \frac{10}{2}(2 \cdot 5.75 - 0.3 \cdot (10-1)) \\ \Leftrightarrow S_{10} &= 5(11.5 - 2.7) \\ \Leftrightarrow \boxed{S_{10} = 44} \end{aligned}$$

. " 44 B A :

"

: .

III	
3	$a_1$
2	$q$
$n$	$n$

$S_n = 72$  ,

$$S_n = \frac{a_1(q^n - 1)}{q - 1}$$

$$72 = \frac{4.8(2^n - 1)}{2 - 1}$$

$$72 = 4.8(2^n - 1)$$

$$15 = 2^n - 1$$

$$2^n = 16$$

$$\boxed{n = 4}$$

. 4 D III :

AD .1

BE .2

CF .3

CF L .4

BE K .5

CF = " 18 .6

BE = " 12 .7

,

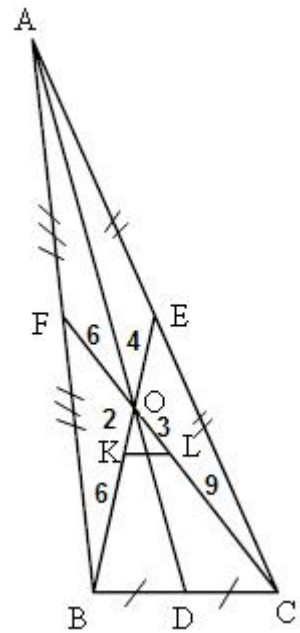
" 20 BOD .8

: "

.KO , LO (1).

$\frac{LO}{CL}$  (2)

. KOL - DOC .



	BE	9	2
	CF	10	3
2:1	$\frac{CO}{OF} = \frac{BO}{OE} = \frac{2}{1}$	11	10,9
	CF = " 18	12	6
	CO = " 12	13	12,11
	CF L	14	4
	CL = " 9	15	14,12
	OL = " 3	16	15,13
	BE = " 12	17	7
	BO = " 8	18	17,11
	BE K	19	5
	BK = " 6	20	17
	OK = " 2	21	20,18
<b>(1) . . .</b>			
	$\frac{LO}{CL} = \frac{1}{3}$	22	16,15
<b>(2) . . . .</b>			
	$\angle KOL = \angle BOC$	23	
	$\frac{KO}{BO} = \frac{LO}{CO} = \frac{1}{4}$	24	22,21,18
. . .	$\Delta KOL \sim \Delta BOC$	25	24,23
	$\frac{S_{\Delta KOL}}{S_{\Delta BOC}} = \frac{1}{16}$	26	25,24

	" 20 BOD	<b>27</b>	<b>8</b>
	AD	<b>28</b>	<b>1</b>
	BD = CD	<b>29</b>	<b>28</b>
'	DOC - BOD	<b>30</b>	<b>29</b>
	" 20 DOC	<b>31</b>	<b>30 ,27</b>
	" 40 BOC	<b>32</b>	<b>31 ,27</b>
	$\frac{S_{\Delta KOL}}{40} = \frac{1}{16}$	<b>33</b>	<b>32 ,26</b>
	$S_{\Delta KOL} = "$ 2.5	<b>34</b>	<b>33</b>
. . .			

AO \_\_\_\_\_ .1  
,

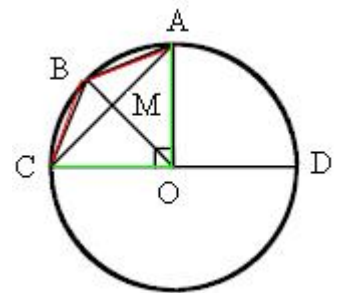
$\angle BCA = \angle BAC$  .2

: "

.ABC .

.BO  $\perp$  AC .

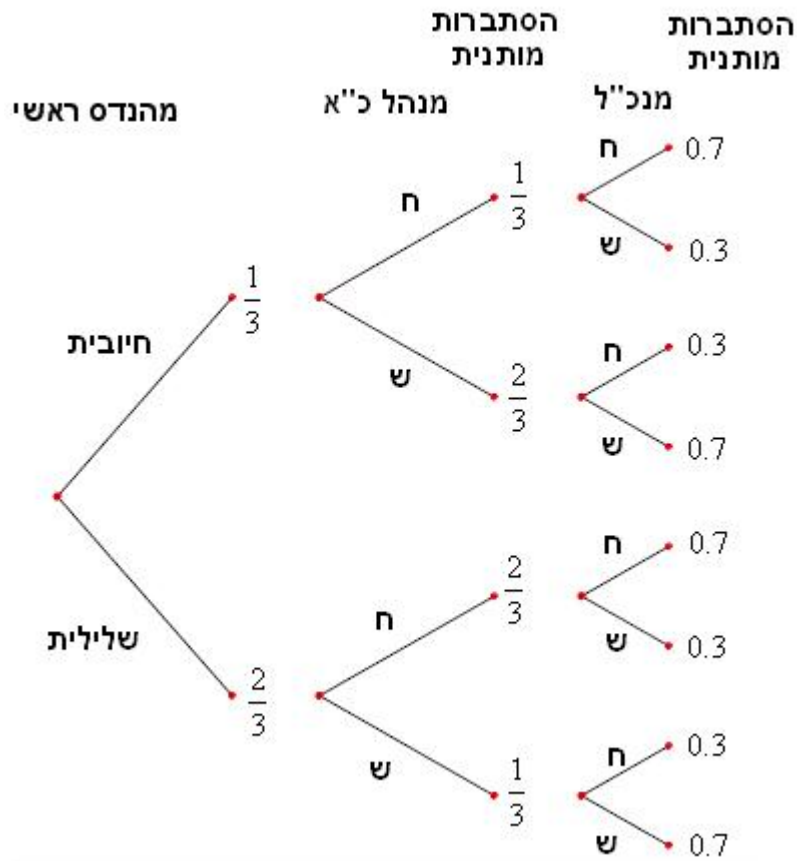
.CM = OM .



	AO	3	1
	$\angle AOC = 90^\circ$	4	3
$360^\circ$	$\angle ADC = 270^\circ$	5	4
	$\angle ABC = 135^\circ$	6	5
. . .			
	$\angle BCA = \angle BAC$	7	2
	AB = BC	8	7
	AO = OC	9	
	AOCB	10	9,8
	BO $\perp$ AC	11	10
. . .			
	CM = AM	12	10
	CM = OM	13	12,4
. . .			



(1).



$$P(\text{ " } \cap \text{ " } \cap \text{ " } ) = P(\text{ " } \cap \text{ " } \cap \text{ " } ) + P(\text{ " } \cap \text{ " } \cap \text{ " } ) = \frac{1}{3} \cdot \frac{1}{3} + \frac{2}{3} \cdot \frac{2}{3} = \frac{5}{9}$$

.  $\frac{5}{9}$  ( " ) ( " ) :

(2)

$$P(\text{ " } / \text{ " } \cap \text{ " } ) = \frac{P(\text{ " } \cap \text{ " } \cap \text{ " } )}{P(\text{ " } \cap \text{ " } )} = \frac{\frac{2}{3} \cdot \frac{2}{3}}{\frac{5}{9}} = 0.8$$

. 0.8 - " " "



:

- S

- A

-  $\bar{A}$ 

- B

-  $\bar{B}$ 

$$N(S) = 900$$

$$N(\bar{A}) = 400 \rightarrow P(\bar{A}) = \frac{N(\bar{A})}{N(S)} = \frac{400}{900} = \frac{4}{9} \rightarrow P(A) = \frac{5}{9}$$

$$N(\bar{A} \cap B) = 300 \rightarrow P(\bar{A} \cap B) = \frac{N(\bar{A} \cap B)}{N(S)} = \frac{300}{900} = \frac{1}{3}$$

$$P(\bar{A} / B) = 0.8 \rightarrow P(A / B) = 0.2$$

$$P(\bar{A} / B) = \frac{P(\bar{A} \cap B)}{P(B)}$$

$$0.8 = \frac{\frac{1}{3}}{P(B)}$$

$$P(B) = \frac{5}{12}$$

	$\bar{A}$	A	
$\frac{5}{12}$	$\frac{1}{3}$	$\frac{1}{12}$	-B
$\frac{7}{12}$	$\frac{1}{9}$	$\frac{17}{36}$	- $\bar{B}$
1	$\frac{4}{9}$	$\frac{5}{9}$	

$$P(B/A) = \frac{P(B \cap A)}{P(A)}$$

$$P(B/A) = \frac{1}{\frac{12}{5}} = \frac{5}{12}$$

$$P(B/A) = 0.15$$

.0.15

, , :

$$P(A \cap \bar{B}) = \frac{17}{36}$$

, , :

$$\frac{17}{36}$$

- S
- C
- $\bar{C}$
- D
- $\bar{D}$

$$N(S) = 400$$

$$N(C) = 300 \rightarrow P(C) = \frac{N(C)}{N(S)} = \frac{300}{400} = 0.75 \rightarrow P(\bar{C}) = 0.25$$

$$P(D/C) = 0.28 \rightarrow P(\bar{D}/C) = 0.72$$

$$P(D/\bar{C}) = 0.24 \rightarrow P(\bar{D}/\bar{C}) = 0.76$$

$$R = \frac{P(C/D)}{P(\bar{C}/D)} = \frac{P(D/C) \cdot P(C)}{P(D/\bar{C}) \cdot P(\bar{C})} :$$

:

" ,

$$\frac{P(D/C)}{P(D/\bar{C})} = \frac{0.28}{0.24} = \frac{7}{6}$$

:

,

$$\frac{P(C)}{P(\bar{C})} = \frac{0.75}{0.25} = 3$$

$$R = \frac{P(C/D)}{P(\bar{C}/D)} = \frac{P(D/C)}{P(D/\bar{C})} \cdot \frac{P(C)}{P(\bar{C})}$$

$$R = \frac{7}{6} \cdot 3$$

$$R = 3.5$$

$$P(C/D) = \frac{R}{1+R}$$

$$P(C/D) = \frac{3.5}{1+3.5}$$

$$P(C/D) = \frac{7}{9}$$

,

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:

$$\cdot \frac{7}{9}$$

"

