

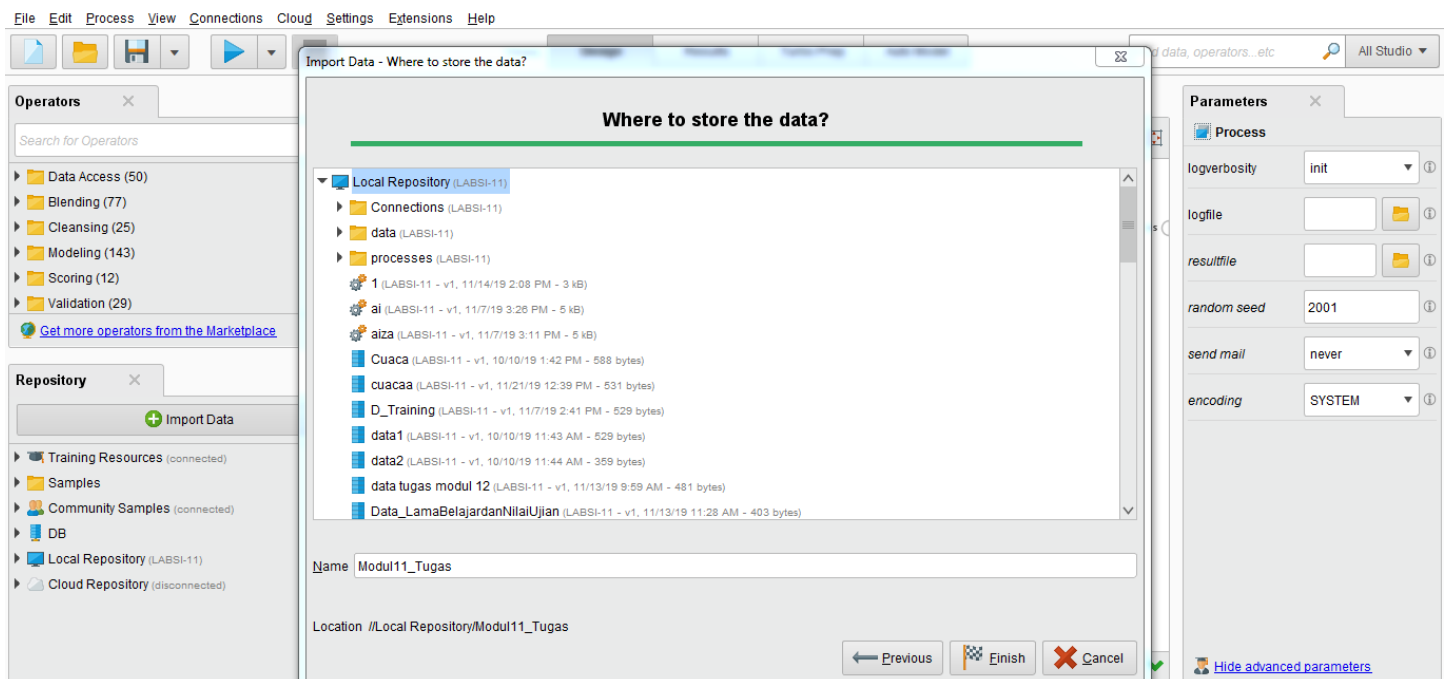
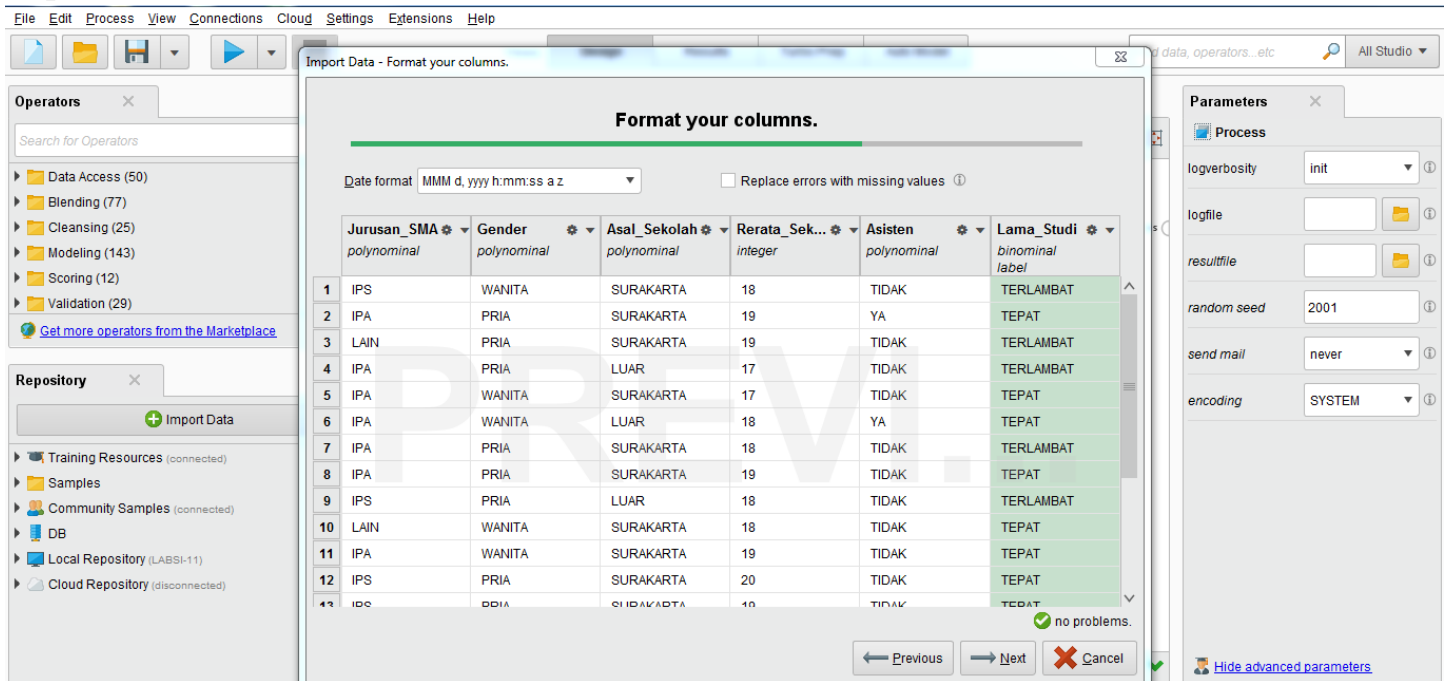
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## Tugas Modul 11

- Import file



- Design (Induction Rule dan nilai Performance Vector)

The screenshot shows the Orange3 software interface. The 'Process' view displays a workflow with the following steps:

- Retrieve Modul11\_Tugas**: A widget that retrieves data from a local repository.
- Cross Validation**: A widget that performs cross-validation on the data. It is configured with 'number of folds' set to 10 and 'sampling type' set to 'automatic'.

The 'Parameters' panel on the right shows settings for the 'Cross Validation' widget:

- Cross Validation**:
  - ☐ split on batch attribute
  - ☐ leave one out
  - number of folds: 10
  - sampling type: automatic
  - ☐ use local random seed
  - ☒ enable parallel execution
- Process**:
  - logverbosity: init
  - logfile: [empty]
  - resultfile: [empty]
  - random seed: 2001
  - send mail: never
  - encoding: SYSTEM

The 'Operators' panel on the left shows a search for 'performance' and a list of predictive models:

- Performance (17)
  - Predictive (7)
    - Performance (Classification)
    - Performance (Binominal Classification)
    - Performance (Regression)
    - Performance (Costs)

- Hasilnya

1. Induction Rule

The screenshot shows the 'RuleModel' window in Orange3. The 'Description' tab displays the induction rules and the training accuracy:

```

if Rerata_Sekolah > 18.500 then TEPAT (2 / 10)
if Gender = PRIA then TERLAMBAT (4 / 0)
if Jurusan_SMA = IPA then TEPAT (0 / 2)
if Jurusan_SMA = IPS then TERLAMBAT (1 / 0)
else TEPAT (0 / 0)

correct: 17 out of 19 training examples.
  
```

2. Performance Vector

The screenshot shows the 'PerformanceVector (Performance)' window in Orange3. The 'Table View' displays the performance metrics:

accuracy: 65.00% +/- 32.02% (micro average: 65.00%)

	true TERLAMBAT	true TEPAT	class precision
pred. TERLAMBAT	4	4	50.00%
pred. TEPAT	3	9	75.00%
class recall	57.14%	69.23%	

- Dengan Data Training yang sama , dengan ketentuan Discretize by Frequency:

1. number of bins = 2

The screenshot displays the Orange3 interface with the following components:

- Operators:** Search results for 'create ass' and 'fp growth' are shown.
- Repository:** Lists training data files like 'Jurusan\_Training' and 'Modul11\_Tugas'.
- Process:** A workflow diagram showing the sequence: Retrieve Modul11\_Tugas → Preprocessing → FP-Growth → Create Association Rules.
- Parameters:** The 'DiscretizebyFrequency' operator parameters are visible, with 'number of bins' set to 2.

2. Hasilnya

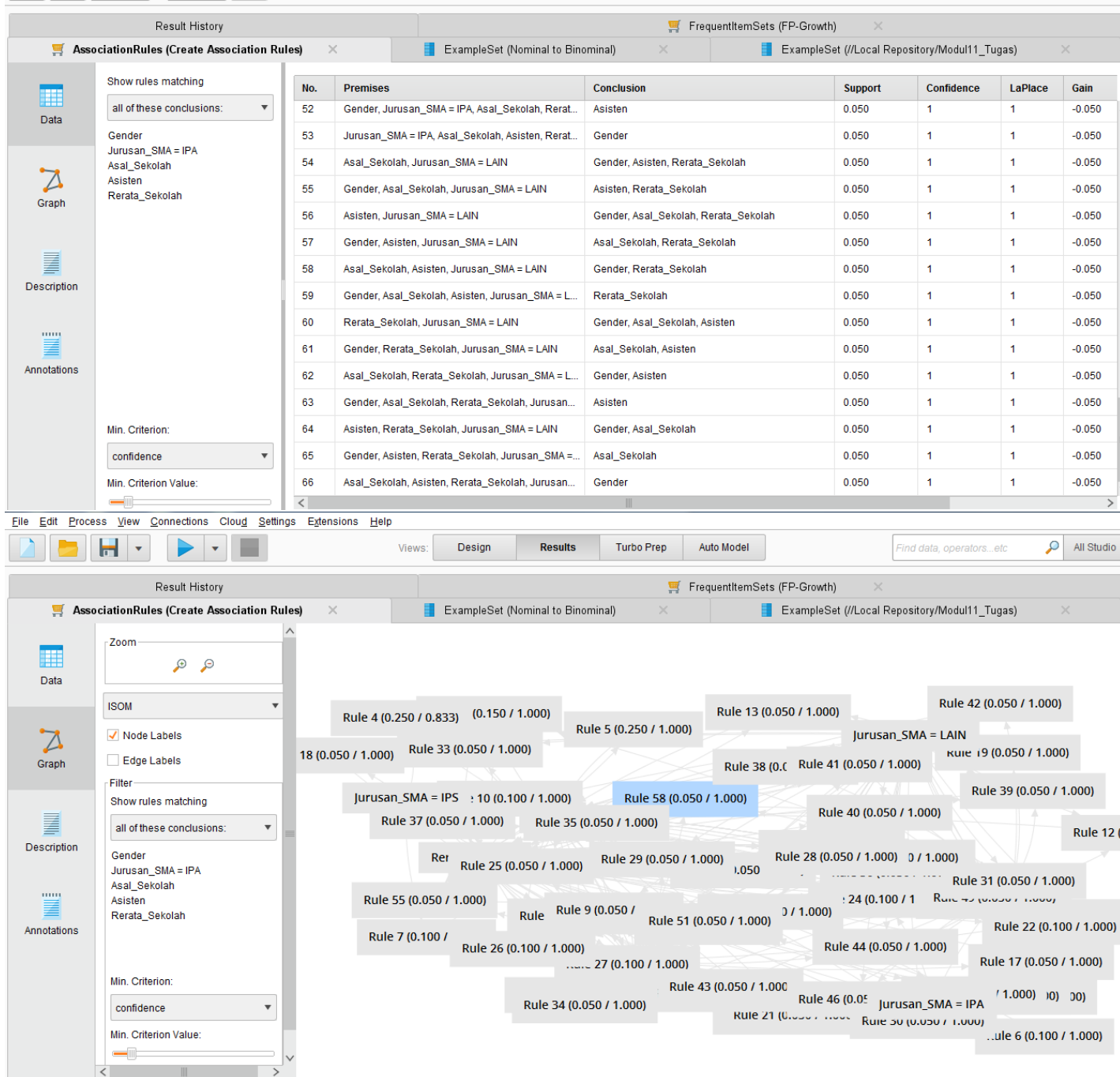
➡ Jumlah set aturan dan total max size

Result History

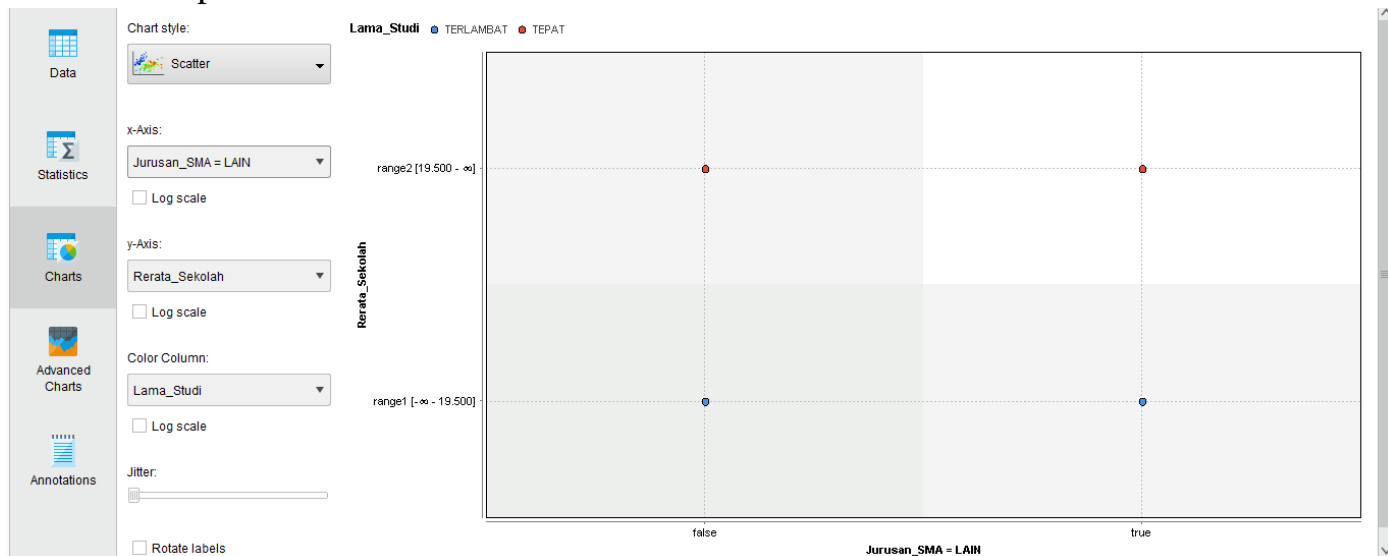
	No. of Sets: 55	Total Max. Size: 5	Size	Support	Item 1	Item 2	Item 3	Item 4	Item 5
	Min. Size: 1	Max. Size: 5	1	0.750	Gender				
	Contains Item:	Update View	1	0.500	Jurusan_SMA = IPA				
			1	0.300	Asal_Sekolah				
			1	0.300	Jurusan_SMA = IPS				
			1	0.250	Asisten				
			1	0.250	Rerata_Sekolah				
			1	0.200	Jurusan_SMA = LAIN				
			2	0.350	Gender	Jurusan_SMA = IPA			
			2	0.250	Gender	Asal_Sekolah			
			2	0.250	Gender	Jurusan_SMA = IPS			
			2	0.200	Gender	Asisten			
			2	0.250	Gender	Rerata_Sekolah			
			2	0.150	Gender	Jurusan_SMA = LAIN			
			2	0.150	Jurusan_SMA = IPA	Asal_Sekolah			
			2	0.200	Jurusan_SMA = IPA	Asisten			

FrequentItemSets (FP-Growth)

## Jumlah data pasangan premis (table dan grafik)

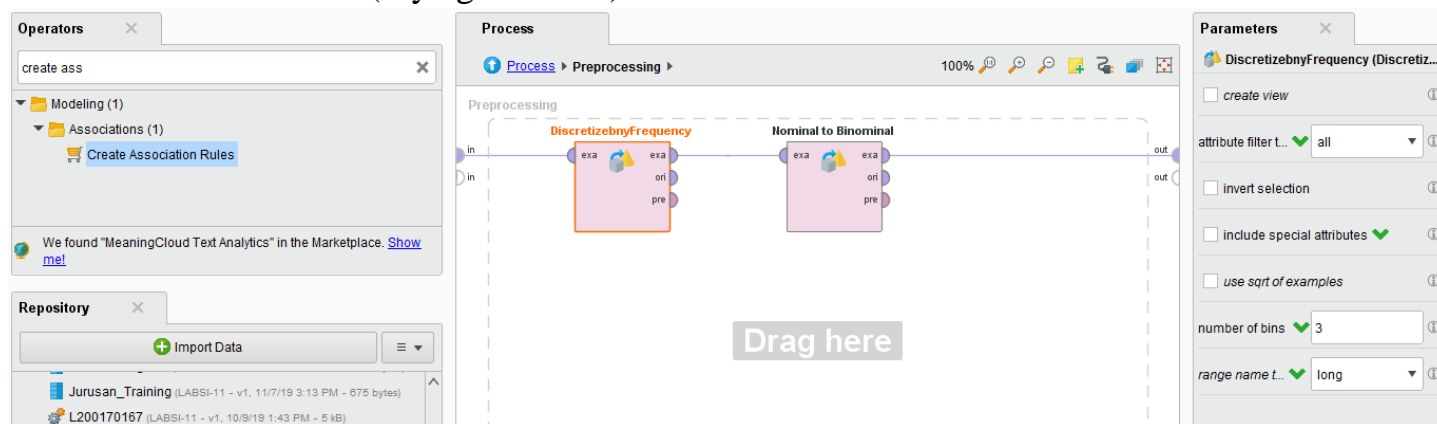


## Grafik chart pola distribusi



- Dengan data training yang sama, dengan ketentuan Discretize by Frequency:

1. number of bins selain 2 (saya gunakan 3)



2. Hasilnya

## Jumlah set aturan dan total max size

<new process> - RapidMiner Studio Free 9.0.003 @ LABSI-11-PC

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators...etc All Studio

AssociationRules (Create Association Rules) ExampleSet (Nominal to Binomial) ExampleSet (//Local Repository/Modul11\_Tugas)

Result History

FrequentItemSets (FP-Growth)

No. of Sets: 85  
Total Max. Size: 5

Min. Size: 1  
Max. Size: 5  
Contains Item: [Input]  
Update View

Size	Support	Item 1	Item 2	Item 3	Item 4	Item 5
1	0.750	Gender				
1	0.500	Jurusan_SMA = IPA				
1	0.400	Rerata_Sekolah = rang...				
1	0.350	Rerata_Sekolah = rang...				
1	0.300	Asal_Sekolah				
1	0.300	Jurusan_SMA = IPS				
1	0.250	Asisten				
1	0.250	Rerata_Sekolah = rang...				

## Jumlah data pasangan premis (table dan grafik)

File Edit Process View Connections Cloud Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators... etc

All Studio

Result History

AssociationRules (Create Association Rules) ExampleSet (Nominal to Binominal) ExampleSet (//Local Repository/Modul11\_Tugas)

Show rules matching

all of these conclusions:

Gender  
Jurusan\_SMA = IPA  
Asal\_Sekolah  
Asisten  
Rerata\_Sekolah = range3 [19.500 ...

Min. Criterion:  
confidence

Min. Criterion Value:

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain
67	Gender, Jurusan_SMA = IPA, Asal_Sekolah, Rerat...	Asisten	0.050	1	1	-0.050
68	Jurusan_SMA = IPA, Asal_Sekolah, Asisten, Rerat...	Gender	0.050	1	1	-0.050
69	Asal_Sekolah, Jurusan_SMA = LAIN	Gender, Asisten, Rerata_Sekolah = range3 [19.50...	0.050	1	1	-0.050
70	Gender, Asal_Sekolah, Jurusan_SMA = LAIN	Asisten, Rerata_Sekolah = range3 [19.500 - ∞]	0.050	1	1	-0.050
71	Asisten, Jurusan_SMA = LAIN	Gender, Asal_Sekolah, Rerata_Sekolah = range3 ...	0.050	1	1	-0.050
72	Gender, Asisten, Jurusan_SMA = LAIN	Asal_Sekolah, Rerata_Sekolah = range3 [19.500 - ...	0.050	1	1	-0.050
73	Asal_Sekolah, Asisten, Jurusan_SMA = LAIN	Gender, Rerata_Sekolah = range3 [19.500 - ∞]	0.050	1	1	-0.050
74	Gender, Asal_Sekolah, Asisten, Jurusan_SMA = L...	Rerata_Sekolah = range3 [19.500 - ∞]	0.050	1	1	-0.050
75	Rerata_Sekolah = range3 [19.500 - ∞], Jurusan_S...	Gender, Asal_Sekolah, Asisten	0.050	1	1	-0.050
76	Gender, Rerata_Sekolah = range3 [19.500 - ∞], Ju...	Asal_Sekolah, Asisten	0.050	1	1	-0.050
77	Asal_Sekolah, Rerata_Sekolah = range3 [19.500 - ...	Gender, Asisten	0.050	1	1	-0.050
78	Gender, Asal_Sekolah, Rerata_Sekolah = range3 ...	Asisten	0.050	1	1	-0.050
79	Asisten, Rerata_Sekolah = range3 [19.500 - ∞], Ju...	Gender, Asal_Sekolah	0.050	1	1	-0.050
80	Gender, Asisten, Rerata_Sekolah = range3 [19.50...	Asal_Sekolah	0.050	1	1	-0.050
81	Asal_Sekolah, Asisten, Rerata_Sekolah = range3 ...	Gender	0.050	1	1	-0.050

