



Department of Local Government Finance

2024 Level II Ratio Study

Problem and Answer Packet with Audio

Problem #1
Calculate the Median of these Sales Ratios

Sales Ratio	Ranked Sales Ratios
1.083	
0.975	
1.035	
0.998	
0.939	

Median	
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Problem #1 Answer
Calculate the Median of these Sales Ratios

Sales Ratio	Ranked Sales Ratios
1.083	0.939
0.975	0.975
1.035	0.998
0.998	1.035
0.939	1.083

Median	.998 or 99.8%
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Problem #2
Calculate the Median of these Sales Ratios

Sales Ratio	Ranked Sales Ratios
0.968	
1.035	
0.998	
0.863	
0.939	
1.075	
Median	



Problem #2 Answer
Calculate the Median of these Sales Ratios

Sales Ratio	Ranked Sales Ratios
0.968	0.863
1.035	0.939
0.998	0.968
0.863	0.998
0.939	1.035
1.075	1.075
Median	.983 or 98.3%

Median - $.968 + .998 = 1.966$ divided by 2 = $.983$ or 98.3%



Problem # 3
Calculate the Mean

Sale #	True Tax Value	Sale Price	Sales Ratio
1	\$ 89,500	\$ 93,100	
2	\$ 118,300	\$ 111,800	
3	\$ 103,400	\$ 107,500	
4	\$ 98,200	\$ 91,400	
5	\$ 112,600	\$ 116,200	
	Total of Sales Ratios		
	Total Number of Ratios		
	Mean		



Problem # 3 Answer
Calculate the Mean

Sale #	True Tax Value	Sale Price	Sales Ratio
1	\$ 89,500	\$ 93,100	0.961
2	\$ 118,300	\$ 111,800	1.058
3	\$ 103,400	\$ 107,500	0.962
4	\$ 98,200	\$ 91,400	1.074
5	\$ 112,600	\$ 116,200	0.969
Total of Sales Ratios			5.024
Total Number of Ratios			5
Mean			1.005

Mean = 1.005 or 100.5%



Problem # 4

Calculate the Weighted Mean

Sale #	True Tax Value	Sale Price
1	\$ 89,500	\$ 93,100
2	\$ 118,300	\$ 111,800
3	\$ 103,400	\$ 107,500
4	\$ 98,200	\$ 91,400
5	\$ 112,600	\$ 116,200

Weighted Mean



Problem #4 Answer
Calculate the Weighted Mean

Sale #	True Tax Value		Sale Price
1	\$ 89,500		\$93,100
2	\$ 118,300		\$ 111,800
3	\$ 103,400		\$ 107,500
4	\$ 98,200		\$ 91,400
5	\$ 112,600		\$ 116,200
	\$ 522,000	Divided by	\$ 520,000

Weighted Mean 1.004 or 100.4%



Problem #5

Using the information provided please complete this Ratio Study

Sale	TTV	Sales Price	Sales Ratio	Median	Abs Dev
1	35,000	36,000			
2	34,100	33,200			
3	91,000	86,400			
4	119,800	129,800			
5	136,600	120,000			
6	174,500	145,300			
Total				Total Absolute Deviation	
				Avg. Absolute Deviation	
			# of Sales		
			Mean		
			Median		
			Wghtd. Mean		
			COD		
			PRD		



Problem #5 Answer

Using the information provided please complete this Ratio Study

Sale	TTV	Sales Price	Sales Ratio	Median	Abs Dev	
1	35,000	36,000	0.972	1.040	0.068	
2	34,100	33,200	1.027	1.040	0.013	
3	91,000	86,400	1.053	1.040	0.013	
4	119,800	129,800	0.923	1.040	0.117	
5	136,600	120,000	1.138	1.040	0.098	
6	174,500	145,300	1.201	1.040	0.161	
				Total Absolute Deviation	0.470	
Total	591,000	550,700			Avg. Absolute Deviation	0.0784
				# of Sales	6	
				Mean	1.052	
				Median	1.040	
				Wghtd. Mean	1.073	
				COD	7.535	
				PRD	0.981	

