This document was exported from Numbers. Each table was converte
objects on each Numbers sheet were placed on separate worksheets.
calculations may differ in Excel.

Numbers Sheet Name	Numbers Table Name
Title Page	Table 1
Tab A	Table 1
Tab B	Table 1
Tab C	Table 1
Tab D	Table 1
Tab E	Table 1

d to an Excel worksheet. All other
Please be aware that formula

Excel Worksheet Name

Fixed Operations 2 -

Financial Calculations and Formulas

NISSAN
Dealership
RAYMOND SARRAF
Student
423
Class #

Service

Service Department Sales And Gross (Labor Only)

Category	Sales	Gross	Gross as % of Sales	%Sales Contribution
Customer Pay	$ 239,656	$ 184,404	76.95%	74.31%
Customer			0%	0.00%
Customer Other			0%	0.00%
Warranty	$ 44,740	$ 35,092	78.44%	13.87%
Warranty Other			0%	0.00%
Internal	$ 38,132	$ 29,287	76.80%	11.82%
NVI / Road Ready/ PDI			0%	0.00%
Adj. Cost Of Labor			0%	0.00%
Total	$ 322,528	$ 248,783	77.14%	100.00%

Clear Form

The Picture

Customer Pay Gross Profit %	76.95%
Total Service Dept. G.P. %	77.14%

Parts To Labor Ratios

Category	Parts Sales	Labor Sales	P/L Ratio
Customer Pay	$ 174,174	$ 239,656	0.73
Customer		$ -	0.00
Customer Other		$ -	0.00
Warranty	$ 69,305	$ 44,740	1.55
Warranty Other		$ -	0.00
Internal	$ 34,382	$ 38,132	0.90
Total	$ 277,861	$ 322,528	0.86

Clear Form

The Picture

Customer Pay Gross Profit %	76.95%
Total Service Dept. G.P. %	77.14%
Parts / Labor Ratio (Cust. Pay Only)	0.73

Service Department Profit Centering

Expense Category	Dollar Amount	% of Gross	Profile
Department Gross	$ 248,783		
Variable Expense	$ 54,743	22.00%	
Selling Expense	$ 149,188	59.97%	
Personnel Expense		0.00%	
Semi-Fixed Expense	$ 43,950	17.67%	
Fixed Expense	$ 24,778	9.96%	
Unallocated Expense		0.00%	
Dealer's Salary		0.00%	
Total Expenses	$ 272,659	109.60%	
Net Profit	$ (23,876)	-9.60%	

Clear Form

The Picture

Customer Pay Gross Profit %	76.95%
Total Service Dept. G.P. %	77.14%
Parts / Labor Ratio (Cust. Pay Only)	0.73
Total Service Dept. Expenses	$ 272,659

Fi

xed Absorption

			% Adj Ovhd Exp
Parts Department Total Gross	$	143,492	15.51%
Service Department Total Gross	$	243,683	26.35%
Body Shop Department Total Gross			0.00%
Total Fixed Gross Profit	$	387,175	
Total Dealership Expense	$	924,914	

Overhead Expense	$	924,914	
Total Fixed Gross Profit	$	387,175	
Total Dealership Expense	$	924,914	
Fixed Absorption Percentage		41.86%	**Guideline** 60%

Clear Form

The Picture

Customer Pay Gross Profit %		76.95%
Total Service Dept. G.P. %		77.14%
Parts / Labor Ratio (Cust. Pay Only)		0.73
Total Service Dept. Expenses	$	272,659

SERVICE INVENTORY ANALYSIS

		Labor Sales / Month		*Effective Labor Rates*		*Hours Billed*
Customer Pay	$	239,656	÷	200.00	=	1198.3
Customer	$	-	÷		=	0.00
Customer Other	$	-	÷		=	0.00
Warranty	$	44,740	÷	180.42	=	248.0
Internal	$	38,132	÷	190.00	=	200.7
New Vehicle Prep	$	-	÷		=	0.00
Total	$	322,528				1647.0

POTENTIAL

$	322,528	÷	1646.95	=	$	195.83			
Total labor sales for month			Total hours billed		Effective Labor Rate				
13.00		x	8	x	26.0		=	2,704.0	
# Service mechanical technicians			# Hours/Day		Working Days/Month			Hours Available to Sell	
2,704.0		x	$ 195.83	=	$	529,533		$	661,916.59
Hours Available to Sell			Effective Labor Rate		Labor sales potential @100%			Labor sales potential @ 125%	

How proficient are your technicians ?

1,647.0	÷	2,704.00	= 60.91%
Total Hours Billed		Hours Available to Sell	Tech Proficiency

Clear Form

Hours Per RO (RO Analysis)		1647.0
Percent of One Item R.O.'s (RO Analysis)		60.00%
Customer Pay Effective Labor Rate (DMS Report)	$	200.00
Warranty Labor Rate (DMS Report)	$	180.42
Total Overall Effective Labor Rate	$	195.83
Overall Technician Proficiency		60.91%

FACILITY POTENTIAL

Number of Bays		19
	x	
Number of Days		26
	x	
Number of Hours		8
	x	
Effective Labor Rate	$	195.83
	equals	
FACILITY POTENTIAL	$	773,933

FACILITY UTILIZATION

Total Labor Sales	$	322,528
	÷	
Facility Potential	$	773,933
	equals	
FACILITY UTILIZATION		41.67%

Clear Form

Calculating Real Cost of

$ 322,528
Labor Sales

1,647.0
Divided by Hours Billed

$ 195.83
= OELR

$ 73,745
Labor Cost

1,647.00
/ Hours Billed

$ 44.78
=Real Cost

$44.78 ÷ 24.00%
Real Cost

Labor

OWNER BASE POTENTIAL

$ 322,528 Labor Sales		5 Year Owner Base	x	8 Annual Hours Purchased	=	0.0 Market Potential / Hours
$ 248,783 -Labor Gross		0.0 Market Potentail/ Hours	x	$ 195.83 Effective Labor Rate	=	$ - 5 Yr. O.B Sales Potential
$ 73,745 =Labor Cost		Avg. Mos. Labor Sales (excluding internal, PDI and NVI)	x	12 Annualized	=	$ - Current Labor Sales Trend
		$ - Labor Sales Trend	÷	$ - 5 Yr. O.B. Sales Potential	=	0.00% Ouch

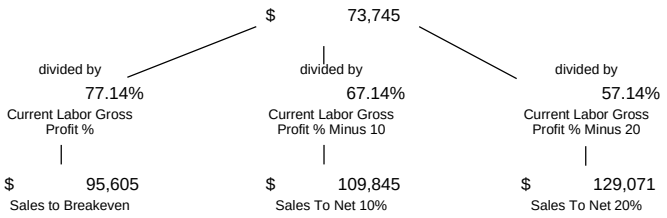
**Note: The industry average of 35% is very poor performance.*

Clea

= $186.58
E.L.R. Needed to earn 76%

Clear Form

PROFIT ON LABOR SALES



Clear Form

ar Form

The Picture

Customer Pay Gross Profit %	76.95%	Customer Pay E.L.R.	$ 200.00
Total Service Dept. G.P.%	77.14%	Total (overall) E.L.R.	$ 195.83
Parts / Labor Ratio (Cust Pay Only)	0.73	Warranty Labor Rate	$ 180.42
Total Service Dept Expense	$ 272,659	Overall Tech Proficiency	60.91%
Hours Per R.O (recap)	1646.95		
Percent Of One Item R.O.'s	60.00%		

Technician Value

Calculate using daily available hours per technician

Hours		Days		Labor Rate		Sales Value
8	x	26	x	$ 195.83	=	$ 40,733

Sales Value		Gross Margin		Profit Value
$ 40,733	x	77.14%	=	$ 31,420

Clear Form

Profit Value		Your Proficiency #		Adjusted Profit Value
$ 31,420	x	70%		$ 21,994
$ 31,420	x	80%		$ 25,136
$ 31,420	x	90%	proficiency	$ 28,278
$ 31,420	x	100%		$ 31,420
$ 31,420	x	110%		$ 34,562
$ 31,420	x	120%		$ 37,704
$ 31,420	x	0.0%	=	$ -

STAFFING REQUIREMENTS

A. Sales To Break Even

Service Expenses for One Month		Current Gross Profit Percent	=	Sales To Break Even
$ 283,410	|	77.14%	=	$ 367,419

B. Sales To Generate 20% Net

Service Expenses for One Month		Current Gross Profit Percent (Minus 20)	=	Sales To Generate 20% Net
$ 283,410	|	57.14%	=	$ 496,033

C. Technician Value

Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X	Work Days Per Month	=	Technician Value
8		80%		$ 195.83		26		$32,587
8		90%		$ 195.83		26		$36,660
8		100%		$ 195.83		26		$40,733
8		120%		$ 195.83		26		$48,880

D. Staffing To Break Even

Sales To Break Even		Technician Value	=	Staffing
$ 367,419	|	32,587 @ 80%	=	11.3
$ 367,419	|	36,660 @ 90%	=	10.0
$ 367,419	|	40,733 @ 100%	=	9.0
$ 367,419	|	48,880 @ 120%	=	7.5

E. Staffing To Generate 20% Net

Sales To Generate 20% Net		Technician Value	=	Staffing
$ 496,033	|	$ 32,587 @ 80%	=	15.2
$ 496,033	|	$ 36,660 @ 90%	=	13.5
$ 496,033	|	$ 40,733 @ 100%	=	12.2
$ 496,033	|	$ 48,880 @ 120%	=	10.1

Clea

Service Advisor Performance

How To Set Advisor Sales Objectives To: Beak Even, Net 10%, & Net 20%

Break Even		Net 10 %		Net 20 %
1 Service Department's Monthly Expenses	$283,410	1 Service Department's Monthly Expenses	$283,410	1 Service Department's Monthly Expenses	
2 Divide by current labor gross profit % to break even	77.14%	2 Divide by current labor gross profit % minus 10 to net 10%	67.14%	2 Divide by current labor gross profit % minus 20 to net 20%	
3 Equals New Sales Objective	$ 367,419	3 Equals New Sales Objective	$ 422,147	3 Equals New Sales Objective	
4 Number of Advisors	6.0	4 Number of Advisors	6.0	4 Number of Advisors	
5 Equals Sales Objective per Advisor	$ 61,237	5 Equals Sales Objective per Advisor	$ 70,358	5 Equals Sales Objective per Advisor	
6 Number of work days per month	26	6 Number of work days per month	26	6 Number of work days per month	
7 Equals daily sales objective per advisor	$ 2,355	7 Equals daily sales objective per advisor	$ 2,706	7 Equals daily sales objective per advisor	
8 Current overall effective labor rate	$ 195.83	8 Current overall effective labor rate	$ 195.83	8 Current overall effective labor rate	
9 Equals daily sales objective per advisor (FRH's)	12.0	9 Equals daily sales objective per advisor (FRH's)	13.8	9 Equals daily sales objective per advisor (FRH's)	

ır Form

Exercise to See What Happens When You Increase Your Hours Per Repair Order

	Number of customer R.O.'s for the month				1540
		x			
	Multiply by .3 hours				0.3 hours
$283,410	Additional customer labor hours generated	=			462.00
		x			
57.14%	Multiply by Customer Labor Rate			$	200.00
$ 496,033	Equals additional Customer Labor Sales Generated	=		$	92,400
		x			
6.0	Multiply by customer Labor Gross Profit %				76.95%
$ 82,672	Equals additional Labor Gross Profit $ generated	=	(A)	$	71,097
26					
$ 3,180					
$ 195.83	Divide Parts Sales R.O. by Labor Sales R.O. to calculate $ parts sales per 1$ of Labor Sales	=			0.73
		x			
16.2	Multiply by Customer Labor Sales			$	92,400
		=			
	Equals additional Customer Parts Sales generated			$	67,153
	Multiply by Customer Parts Sales Gross Profit %	x			34.00%
	Equals additional Parts Gross Profit $ Generated	=	(B)	$	22,832
	Add Gross Profit from Labor (A) and Parts (B)	=		$	93,930

Clear Form

Clear Form

Labor Rate Calculations

1 Calculate the **Labor Rate** for the following operation.

A/C Charge and Check

		Labor Price	$144.00	
		Hours	1.2	
$144.00	|	1.2	=	$120.00
Price		Hours		Labor Rate

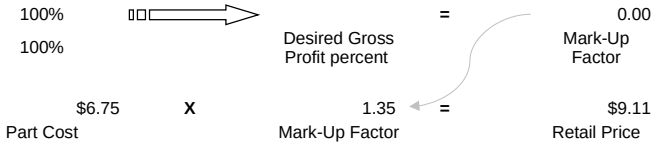
2 Calculate the **Effective Labor Rate** for the following "Repair" operations.

Labor Operations	Labor Price		Labor Hours		Labor Rate
Clean Fuel Injectors	$ 117.60	|	1.20	=	$ 98.00
R&R Rear Hub Bearing.	$ 96.00	|	0.80	=	$ 120.00
Replace Trans. Pan gasket	$ 107.80	|	1.10	=	$ 98.00
R&R Headlight unit (1)	$ 108.00	|	0.90	=	$ 120.00
	$ 429.40	|	4.0	=	$ 107.35
	Total Price		Total Hours		Effective Labor Rate
					(For This R.O.)

Clear Form

Calculating Mark-Up

3 Using the following formula, mark-up a part costing $6.72 to attain a 35% gross profit (round to the nearest cent)



4 Calculate the "Weighted Average" price at a 40% Gross Profit for the following parts (round to the nearest cent)

Item	Cost		Annual Turnover		Total Cost
Filter #1	$4.36	**X**	112	**=**	$488.32
Filter #2	$4.01	**X**	56	**=**	$224.56
Filter #3	$3.56	**X**	85	**=**	$302.60
Filter #4	$3.86	**X**	202	**=**	$779.72
Filter #5	$3.51	**X**	36	**=**	$126.36
	Total Items		491	Total Cost	$1,921.56

$ 1,921.56 Total Cost		491 Total Items	**=**	$ 3.91 Weighted Average **Cost**
$ 3.91 Weighted Average Cost	X	1.40 Mark-Up Factor	**=**	$ 5.48 Weighted Average **Price**

Clear Form

Cost Of A Come-Back

Lost Customer Opportunity			1.5	
Average Hours per R.O.	**X**		1.1	
	=		1.7	
Effective Labor Rate	**X**	$	195.83	
Lost Labor Sales	=	$	323	(A)
Service Department Gross Profit % (Excluding Sublet)	**X**		77.14%	
Lost Labor Gross	=	$	249	(B)
Lost Labor Sales		$	323	(A)
Parts / Labor Ratio	**X**		0.73	
	=	$	235	
Parts Dept Gross Profit % R.O.Sales	**X**		34.00%	
Lost Parts Gross	=	$	80	(C)
Lost Labor Gross		$	249	(B)
Lost Parts Gross	+	$	80	(C)
Total Lost Gross	=	$	329	

Clear Form