Operational:

For the operational report:

customer_name	id_order	order_date	ship_postalcode	Category Name	Subcategory Name	id_product	Product Name	profit
Julie Kriz	CA-2020-100783	2020-09-04 0:00	75043	Office Supplies	Art	OFF-AR-10000380	Hunt PowerHouse Electric Pencil Sharpener, Blue	3.80
Katrina Bavinger	CA-2020-101182	2020-09-04 0:00	92307	Office Supplies	Paper	OFF-PA-10001800	Xerox 220	6.22
Katrina Bavinger	CA-2020-101182	2020-09-04 0:00	92307	Technology	Phones	TEC-PH-10003589	invisibleSHIELD by ZAGG Smudge-Free Screen Protector	15.11
Greg Maxwell	CA-2020-102750	2020-09-04 0:00	90036	Furniture	Tables	FUR-TA-10000198	Chromcraft Bull-Nose Wood Oval Conference Tables & Bases	-99.18
Maribeth Dona	CA-2020-109757	2020-09-04 0:00	44312	Office Supplies	Art	OFF-AR-10002335	DIXON Oriole Pencils	0.62
Maribeth Dona	CA-2020-109757	2020-09-04 0:00	44312	Office Supplies	Binders	OFF-BI-10001634	Wilson Jones Active Use Binders	-3.06
Maribeth Dona	CA-2020-109757	2020-09-04 0:00	44312	Office Supplies	Binders	OFF-BI-10004001	GBC Recycled VeloBinder Covers	-20.45
Maribeth Dona	CA-2020-109757	2020-09-04 0:00	44312	Office Supplies	Paper	OFF-PA-10000007	Telephone Message Books with Fax/Mobile Section, 4 1/4" x 6"	3.74
Pete Kriz	CA-2020-116680	2020-09-04 0:00	94122	Furniture	Tables	FUR-TA-10001771	Bush Cubix Conference Tables, Fully Assembled	92.39
Pete Kriz	CA-2020-116680	2020-09-04 0:00	94122	Office Supplies	Binders	OFF-BI-10004022	Acco Suede Grain Vinyl Round Ring Binder	4.34
Tiffany House	CA-2020-117261	2020-09-04 0:00	90032	Office Supplies	Storage	OFF-ST-10000419	Rogers Jumbo File, Granite	0.54
Michael Moore	CA-2020-117394	2020-09-04 0:00	19120	Technology	Accessories	TEC-AC-10000199	Kingston Digital DataTraveler 8GB USB 2.0	-1.43
Aimee Bixby	CA-2020-120761	2020-09-04 0:00	11561	Technology	Accessories	TEC-AC-10000171	Verbatim 25 GB 6x Blu-ray Single Layer Recordable Disc, 25/Pack	39.54
Cynthia Voltz	CA-2020-137582	2020-09-04 0:00	94601	Office Supplies	Binders	OFF-BI-10001757	Pressboard Hanging Data Binders for Unburst Sheets	4.13
Helen Wasserman	CA-2020-140326	2020-09-04 0:00	60653	Furniture	Bookcases	FUR-BO-10000112	Bush Birmingham Collection Bookcase, Dark Cherry	-117.88
Helen Wasserman	CA-2020-140326	2020-09-04 0:00	60653	Office Supplies	Art	OFF-AR-10001149	Sanford Colorific Colored Pencils, 12/Box	0.86
Helen Wasserman	CA-2020-140326	2020-09-04 0:00	60653	Office Supplies	Paper	OFF-PA-10004041	It's Hot Message Books with Stickers, 2 3/4" x 5"	5.55

Executive:

1. Month-wise profit for Category and Region:

Name of Category	Year	Month	Region	Q of Order	Sum profit	% Of Profit
Technology	2020	1	Central	440	8746.65	6.12
Office Supplies	2020	2	East	1982	11591.65	5.68
Technology	2020	2	East	729	19300.92	6.15
Technology	2020	2	West	845	18973.25	6.2
Office Supplies	2020	4	West	2557	22121.21	7.91
Office Supplies	2020	6	South	1195	5780.42	4.42
Office Supplies	2020	7	Central	1939	85.48	0.05
Furniture	2020	10	Central	501	-1281.28	-0.96
Furniture	2020	10	South	377	-584.4	-0.47
Technology	2020	11	South	343	3652.89	2.34
Furniture	2020	12	East	697	2180.12	1.12
Furniture	2020	12	West	862	2703.94	1.11

2. Month-wise comparison of profits by Category:

Category Name	January	February	March	April	May	June	July	August	September	October	November	December
Furniture	-39.44	-199.04	1000.85	202.46	-72.88	905	324.62	322.24	1548.68	-2526.92	406.06	1146.75
Office Supplies	3260.45	953.83	2715.96	3370.6	3153.73	3378.98	2563.28	6067.86	4847.74	4040.78	3451.23	1774.31
Technology	3919.43	859.09	11035.08	-2639.77	3261.74	3939.36	4064.71	2650.86	4595.13	7761.42	5674.94	5551.73

3. Profit and Quantity sold by Month and category:

Category Name	Subcategory Name	Year	Month	Sum profit	Q orders
Office Supplies	Fasteners	2020	1	304.95	64
Office Supplies	Binders	2020	3	7669.74	500
Technology	Copiers	2020	3	25031.79	22
Office Supplies	Labels	2020	3	1744.61	114
Office Supplies	Appliances	2020	4	7865.27	165
Technology	Machines	2020	4	-2869.22	33
Furniture	Chairs	2020	6	7643.55	190
Technology	Phones	2020	7	12849.32	294
Furniture	Furnishings	2020	8	4099.16	316
Technology	Accessories	2020	9	15661.8	274
Office Supplies	Art	2020	9	2221.96	282
Furniture	Bookcases	2020	9	-583.63	76
Office Supplies	Envelopes	2020	9	1441.76	71
Office Supplies	Paper	2020	9	12040.84	459
Office Supplies	Storage	2020	9	7244.93	287
Office Supplies	Supplies	2020	9	-955.31	59
Furniture	Tables	2020	9	-8140.69	104

4. Profit and Quantity sold by quarter and category:

name_category	name_subcategory	Year	Quarter	Q orders	Sum profit
Office Supplies	Storage	2017	1	845	21120.96
Furniture	Furnishings	2017	2	956	12976.09
Office Supplies	Envelopes	2017	2	254	6964.18
Office Supplies	Fasteners	2017	3	217	949.52
Office Supplies	Supplies	2017	3	190	-1189.1
Technology	Accessories	2017	3	773	41871.34
Furniture	Chairs	2017	4	616	26602.23
Office Supplies	Art	2017	4	796	6527.79
Furniture	Tables	2018	1	319	-17725.48
Office Supplies	Binders	2018	3	1522	30180.34
Technology	Copiers	2018	3	68	55617.82
Office Supplies	Appliances	2018	4	466	18138.01
Office Supplies	Paper	2019	1	1368	34021.01
Technology	Phones	2019	1	889	44515.73
Office Supplies	Labels	2019	2	364	5546.25
Technology	Machines	2019	4	115	3384.76
Furniture	Bookcases	2020	3	228	-3472.56

5. Quantity of return orders/Loss of profit

name_category	name_subcategory	q orders	Loss
Furniture	Furnishings	1	-30.19
Furniture	Chairs	1	-21.29
Office Supplies	Supplies	2	-8.84
Office Supplies	Paper	2	-21.06
Office Supplies	Binders	3	-26.43
Office Supplies	Appliances	1	-13.7
Office Supplies	Art	1	-2.56
Technology	Copiers	1	-1014.98
Technology	Accessories	2	-158.78

6. Top 10 products with more profit:

Name_product	Year	Month	Sum_profit
Canon imageCLASS 2200 Advanced Copier	2020	10	3919.99
Fellowes PB500 Electric Punch Plastic Comb Binding Machine with Manual Bind	2020	10	1906.48
3D Systems Cube Printer, 2nd Generation, Magenta	2020	10	1351.99
GBC DocuBind TL300 Electric Binding System	2020	10	843.17
Fellowes Powershred HS-440 4-Sheet High Security Shredder	2020	10	767.2
Polycom CX600 IP Phone VoIP phone	2020	10	647.89
Acco 7-Outlet Masterpiece Power Center, Wihtout Fax/Phone Line Protection	2020	10	510.64
Polycom VVX 310 VoIP phone	2020	10	374.38
Bretford Rectangular Conference Table Tops	2020	10	346.04
Logitech G19 Programmable Gaming Keyboard	2020	10	267.82

7. Top 10 products with more profit:

Name_product	Year	Month	Sum_profit
Tennsco Commercial Shelving	2020	10	0.41
Maxell 4.7GB DVD-R 5/Pack	2020	10	0.44
Design Ebony Sketching Pencil	2020	10	0.5
Wilson Jones Easy Flow II Sheet Lifters	2020	10	0.5
Rogers Handheld Barrel Pencil Sharpener	2020	10	0.58
Newell 350	2020	10	0.59
Hoover Replacement Belt for Commercial Guardsman Heavy-Duty Upright Vacuum	2020	10	0.67
Newell 320	2020	10	0.9
Stacking Tray, Side-Loading, Legal, Smoke	2020	10	0.99
Prang Drawing Pencil Set	2020	10	1.11

8. Profit by Shipping mode

Ship mode	Year	Month	Sum_profit
First Class	2020	5	267.4
Same Day	2020	5	1052.99
Second Class	2020	5	1028.02
Standard Class	2020	5	3994.17

9. Profit by Segment:

Segment	Year	Month	Sum profit
Corporate	2019	1	1865.45
Home Office	2019	1	1063.73
Consumer	2019	1	-104.37
Consumer	2019	2	3882.9
Home Office	2019	2	1029.26
Corporate	2019	2	92.41
Consumer	2019	3	2468.67
Home Office	2019	3	1449.75
Corporate	2019	3	-327.46
Corporate	2019	4	3266.52
Home Office	2019	4	23.02
Consumer	2019	4	-366.46
Consumer	2019	5	4067.59
Corporate	2019	5	3244.87
Home Office	2019	5	1349.68
Consumer	2019	6	3141.51
Home Office	2019	6	921.12
Corporate	2019	6	687.75
Consumer	2019	7	2685.45

Corporate	2019	7	1390.76
Home Office	2019	7	356.67
Consumer	2019	8	1267.11
Corporate	2019	8	992
Home Office	2019	8	-197.04
Consumer	2019	9	6951.67
Home Office	2019	9	1373.45
Corporate	2019	9	992
Corporate	2019	10	9650.17
Home Office	2019	10	5392.53
Consumer	2019	10	1200.44
Corporate	2019	11	4779.29
Home Office	2019	11	1133.32
Consumer	2019	11	-1901.19
Consumer	2019	12	12394.58
Corporate	2019	12	4361.42
Home Office	2019	12	1046.26

10. Yearly city-wise churn rate of customers (Rate at which customers stopped doing business for a period)

year	city_name	Total_Customers	% Churn
2020	Minneapolis	5	20
2020	New York City	133	0.75
2020	Providence	4	25
2020	San Diego	19	5.26
2020	Greenwood	1	100
2020	Los Angeles	117	0.85
2020	Philadelphia	88	1.14
2020	Seattle	77	1.3
2020	Bloomington	2	50
2020	Henderson	6	16.67
2020	Pearland	2	50

2020	Phoenix	8	12.5
2020	Portland	5	20
2020	Carrollton	3	33.33
2020	Bellevue	1	100
2020	Lakewood	13	7.69
2020	Lebanon	1	100