



# **INVENTORY ANALYSIS using power bi**

# Introduction

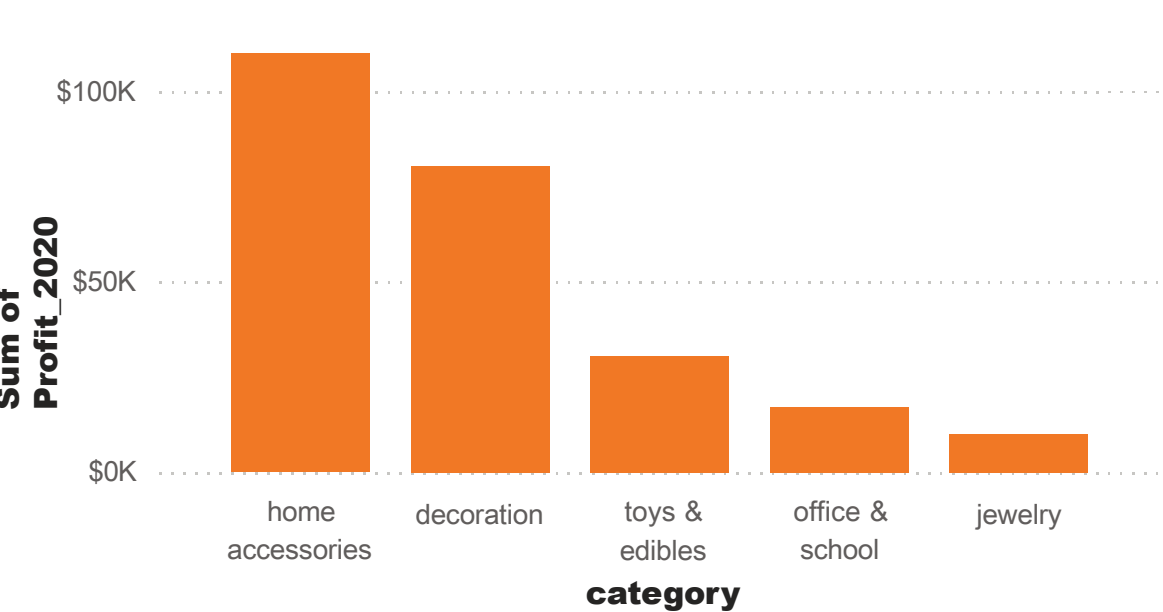
- What is inventory analysis?
- Inventory analysis is a technique used by businesses to track, measure, and optimize their stock of products or services <sup>1</sup>. The goal of inventory analysis is to get an accurate picture of what a company has on hand so that they can make informed decisions about ordering and stocking levels <sup>1</sup>. By understanding what inventory items are selling well and which ones aren't, businesses can make the best data-driven decisions <sup>1</sup>.



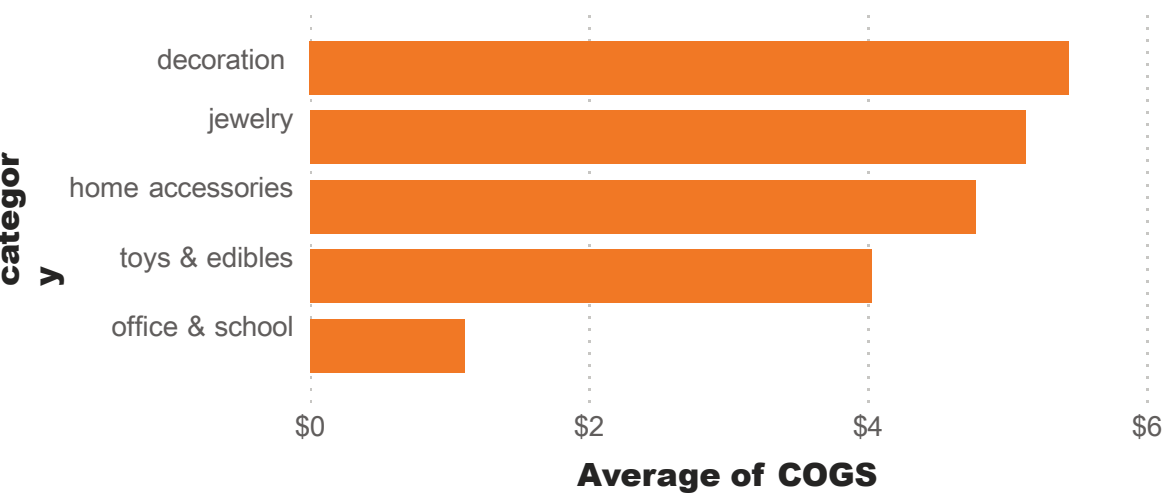
## Important aspects

- Revenue
- Revenue is the total amount of money a business earns from its sales of goods or services.
- Profit
- Profit is the amount of money a business earns after deducting all its expenses, including the cost of goods sold (COGS).
- Cost of goods sold
- COGS is the direct cost of producing or acquiring the goods sold by a business. It includes the cost of materials and labor directly used to produce or acquire the goods.

Sum of Profit\_2020 by category



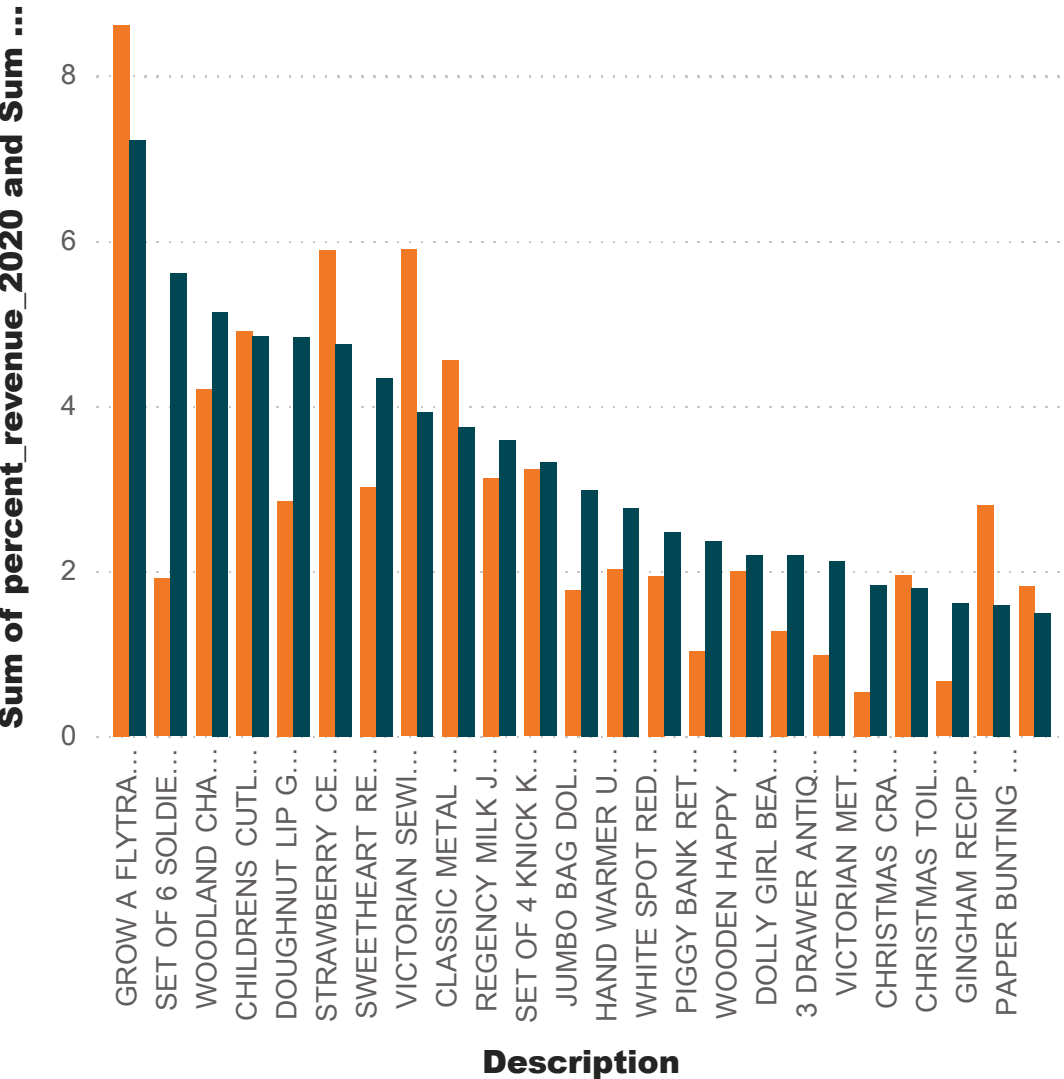
Average of COGS by category



Description	Quantity	Sum of Retail_Pri
3 DRAWER ANTIQUE WHITE WOOD CABINET	51	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	39	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	5	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	18	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	96	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	119	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	36	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	30	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	9	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	37	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	4	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	36	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	54	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	4	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	138	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	3	\$13.
3 DRAWER ANTIQUE WHITE WOOD CABINET	63	\$13.
3 RAFFIA RIBBONS VINTAGE CHRISTMAS	90	\$1.
3 RAFFIA RIBBONS VINTAGE CHRISTMAS	23	\$1.
3 RAFFIA RIBBONS VINTAGE CHRISTMAS	10	\$1.
Total	135787	\$70

Sum of percent\_revenue\_2020 and Sum of percent\_revenue\_2021 by Description

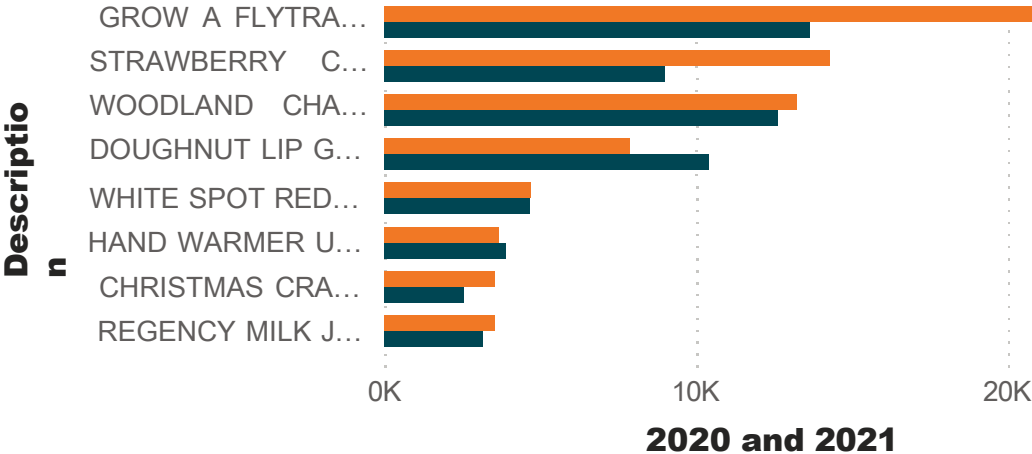
Sum of percent\_revenue\_2020 Sum of percent\_revenue\_2021



Description	Revenue_2021	percent_revenue_2021	ABC_class
GROW A FLYTRAP OR SUNFLOWER IN TIN	\$33,717.97	7.21	A [High Value]
SET OF 6 SOLDIER SKITTLES	\$26,176.26	5.60	A [High Value]
WOODLAND CHARLOTTE BAG	\$24,014.10	5.14	A [High Value]
CHILDRENS CUTLERY POLKADOT GREEN	\$22,661.31	4.85	A [High Value]
DOUGHNUT LIP GLOSS	\$22,600.55	4.83	A [High Value]
STRAWBERRY CERAMIC TRINKET BOX	\$22,205.30	4.75	A [High Value]
SWEETHEART RECIPE BOOK STAND	\$20,275.92	4.34	A [High Value]
VICTORIAN SEWING BOX SMALL	\$18,360.40	3.93	A [High Value]
CLASSIC METAL BIRDCAGE PLANT HOLDER	\$17,503.16	3.74	A [High Value]
REGENCY MILK JUG PINK	\$16,737.56	3.58	A [High Value]
SET OF 4 KNICK KNACK TINS DOILY	\$15,481.60	3.31	A [High Value]
JUMBO BAG DOLLY GIRL DESIGN	\$13,940.31	2.98	A [High Value]
HAND WARMER UNION JACK	\$12,928.86	2.77	A [High Value]
WHITE SPOT RED CERAMIC	\$11,539.84	2.47	A [High Value]
Total	\$467,486.81	100.00	

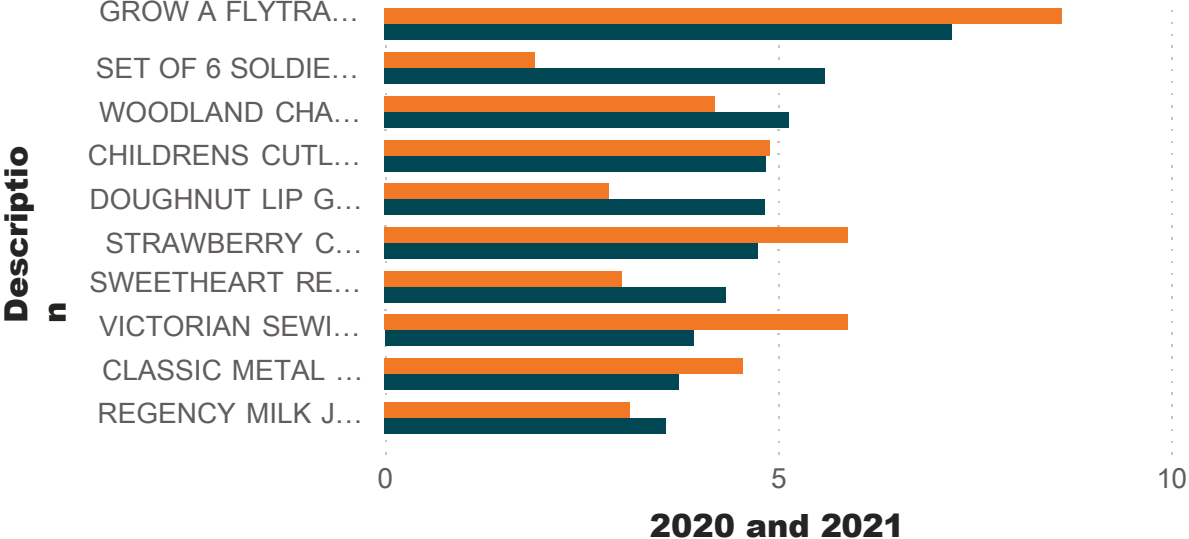
Inventory stock by year

2020 2021




Percent of Total Revenue

2020 2021



Description	Inventory_turnover	ABC_
3 DRAWER ANTIQUE WHITE WOOD CABINET	1.36	A [High]
3 RAFFIA RIBBONS VINTAGE CHRISTMAS	1.33	C [Low]
3 WHITE CHOC MORRIS BOXED CANDLES	1.27	C [Low]
3D SHEET OF DOG STICKERS	0.89	C [Low]
A PRETTY THANK YOU CARD	1.51	C [Low]
ANTIQUE OLIVE GREEN FLOWER EARRINGS	0.03	C [Low]
ASSORTED TOFFEE CHOCOLATE	1.23	B [Medium]
ASSORTED TUTTI FRUTTI HEART BOX	0.46	C [Low]
BEADED CRYSTAL HEART GREEN ON STICK	1.21	C [Low]
BLACK MEDIUM GLASS CAKE STAND	0.17	C [Low]
BLACK SQUARE TABLE CLOCK	0.37	C [Low]
BLACK/WHITE GLASS/SILVER BRACELET	0.02	C [Low]
BLUE CHENILLE SHAGGY CUSHION COVER	0.13	C [Low]
BLUE FLY SWAT	0.47	C [Low]
BLUE WIRE SPIRAL CANDLE HOLDER	0.06	C [Low]
CHAMPAGNE TRAY BLANK CARD	0.03	C [Low]
CHILDRENS CUTLERY POLKADOT GREEN	1.78	A [High]
CHRISTMAS CRAFT TREE TOP ANGEL	1.49	B [Medium]
CHRISTMAS TOILET ROLL	1.32	B [Medium]
CLASSIC DIAMANTE EARRINGS SET	0.24	C [Low]
CLASSIC METAL BIRDCAGE PLANT HOLDER	1.37	A [High]
DIAMANTE HAIR GRIP PACK/2 PERIDOT	0.15	C [Low]
DIAMANTE NECKLACE	0.02	C [Low]
DIAMANTE RING ASSORTED IN BOX.	0.89	C [Low]
DOILEY BISCUIT TIN	0.66	C [Low]
DOILEY STORAGE TIN	1.45	B [Medium]
Total	94.99	

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- As we can see, Decoration and jewelry items have COGS of around 5\$
  - Profit dominated by Home & accessories in 2020,
  - With \$110K
  - 'Grow a flytrap or sunflower' is our top seller
  - Out of 1.3 lakh of products we made around 4.67 lakh on 2021

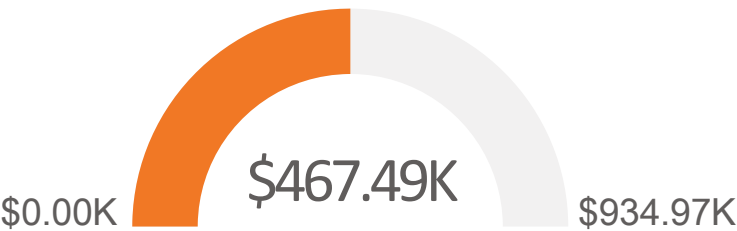
- ABC analysis
- ABC analysis is an inventory categorization technique used in materials management <sup>1</sup>. It divides an inventory into three categories: "A items" with very tight control and accurate records, "B items" with less tightly controlled and good records, and "C items" with the simplest controls possible and minimal records <sup>1</sup>. The ABC analysis provides a mechanism for identifying items that will have a significant impact on overall inventory cost while also providing a mechanism for identifying different categories of stock that will require different management and controls <sup>1</sup>.



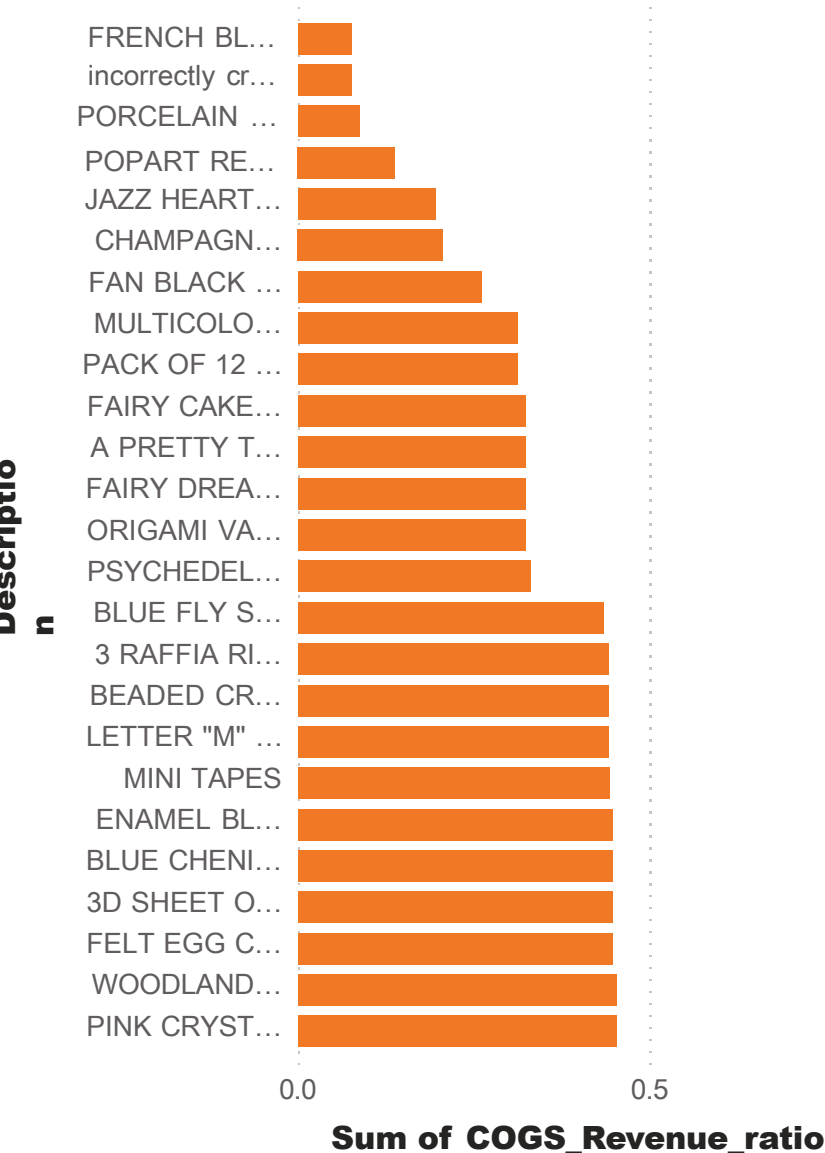
ABC\_class

- A [High Value]
- B [Medium Value]
- C [Low Value]

Revenue\_2021

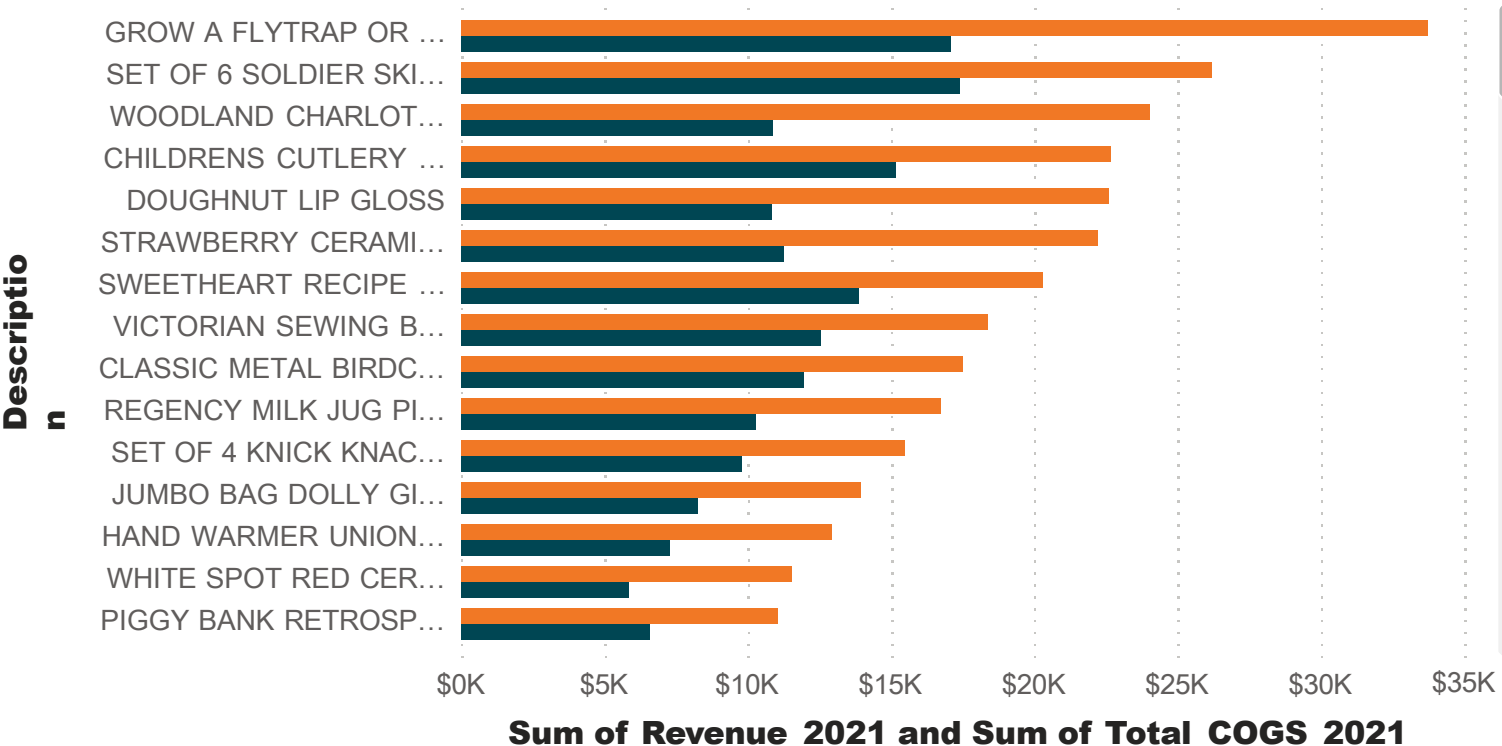


Sum of COGS\_Revenue\_ratio and First SKU-ID by Description

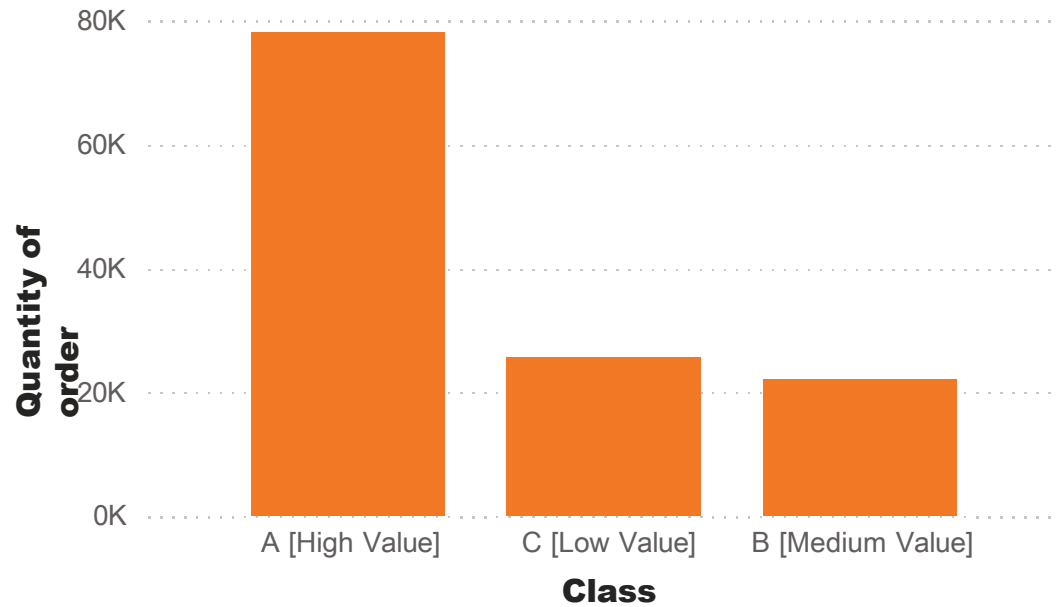


Sum of Revenue\_2021, Sum of Total\_COGS\_2021 and First SKU-ID by Description

Sum of Revenue\_2021 Sum of Total\_COGS\_2021



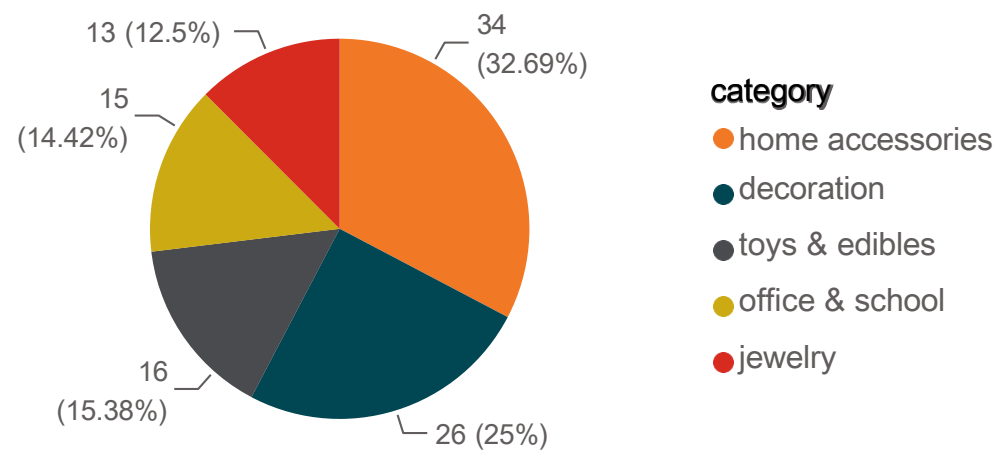
### Quantity of items by ABC class



### Inventory turnover by category



### Count of Description by category



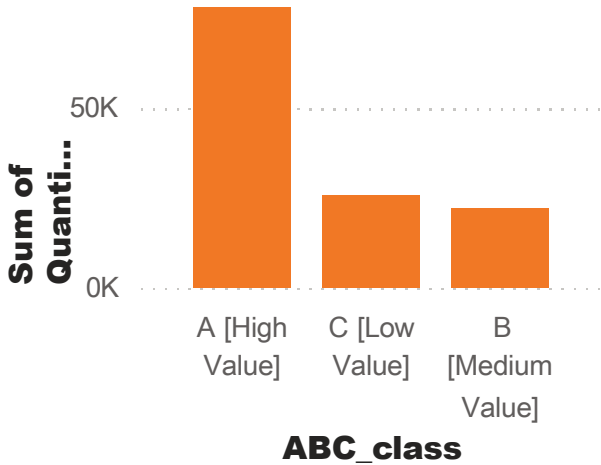
### Revenue by category



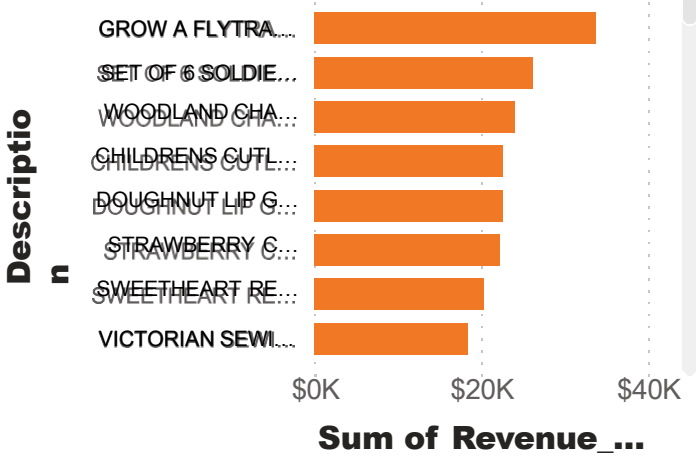
Quantity by Country



Sum of Quantity\_2021 by ABC\_class

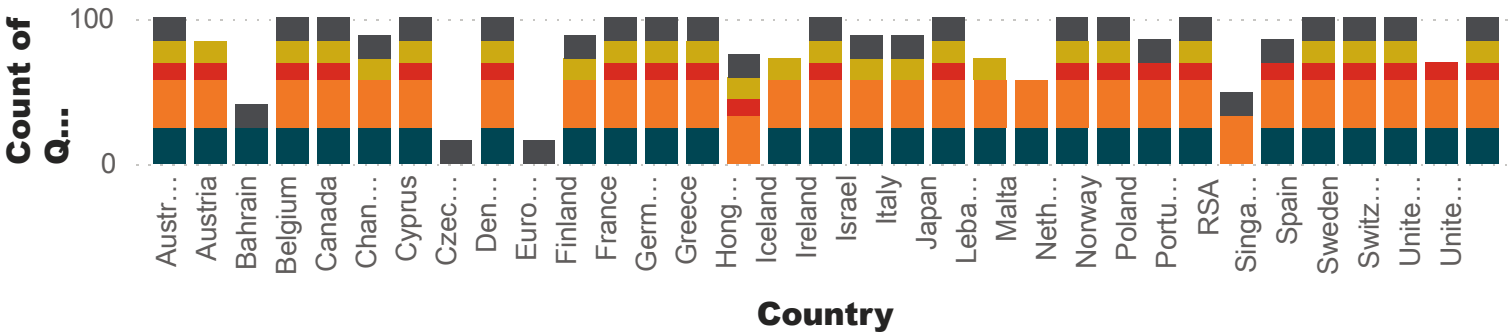


Sum of Revenue\_2021 by Description




Count of Quantity\_2021 by Country and category

category ● decoration ● home accessories ● jewelry ● office & school ● toys & edibles



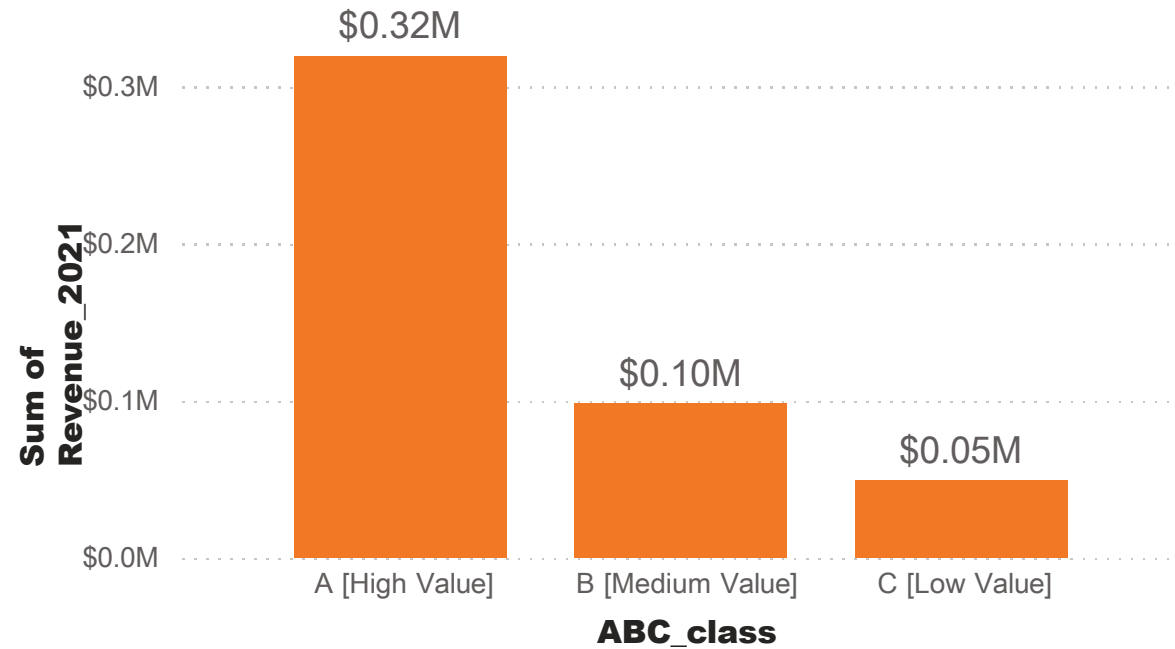
Description	Inventory_turnover	Quantity_2021
GROW A FLYTRAP OR SUNFLOWER IN TIN	1.42	13651
WOODLAND CHARLOTTE BAG	1.76	12639
DOUGHNUT LIP GLOSS	1.97	10415
STRAWBERRY CERAMIC TRINKET BOX	1.46	8990

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- Most products, and top sellers are home accessories.
  - Jewelry has least revenue and inventory turn over
  - Most orders are of high value, which is class A
  - Grow a flytrap has the revenue twice as its COGS!



Final dashboard

## 2021 Revenue by ABC category



Description	Quantity_2021	Inventory_turnover
PINK CRYSTAL GUITAR PHONE CHARM	1	0.03
RED WHITE SCARF HOT WATER BOTTLE	1	0.01
DIAMANTE NECKLACE	3	0.02
ANTIQUE OLIVE GREEN FLOWER EARRINGS	6	0.03
Total	94.99	

Number of items

104

Average Turnover

0.94

Total 2021 COGS

268.92K

## Distribution of ABC

ABC\_class ● A [High Value] ● B [Medium Value] ● C [Low Value]

