

Index and Match Function Assignment

Worksheet:

| Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales |
|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| 101 | Product A | Electronics | 120 | 130 | 140 | 150 | 160 |
| 102 | Product B | Furniture | 150 | 160 | 170 | 180 | 190 |
| 103 | Product C | Electronics | 200 | 210 | 220 | 230 | 240 |
| 104 | Product D | Clothing | 90 | 100 | 110 | 120 | 130 |
| 105 | Product E | Furniture | 220 | 230 | 240 | 250 | 260 |
| 106 | Product F | Electronics | 130 | 140 | 150 | 160 | 170 |

Questions:

1. Use INDEX and MATCH to find the sales for Product C in March.
2. Use INDEX and MATCH to find the category for Product E.
3. Use INDEX and MATCH to find the maximum sales for Product B across all months.
4. Use INDEX and MATCH to find the month with the maximum sales for Product A
5. Use INDEX, MATCH, and SUMIF to sum the sales for all products in the "Electronics category for April.
6. Use INDEX and MATCH to calculate the average sales for Product D across all months.
7. Use INDEX and MATCH to find the sales for Product ID 105 in May.
8. Use INDEX and MATCH to create a dynamic lookup where the user can input a product and a month, and the formula returns the corresponding sales.

Answer

1. Use INDEX and MATCH to find the sales for Product C in March.

lab 3 index vs match assignment

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| | A | B | C | D | E | F | G | H | I | J | K |
|---|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|---|---|---|
| 1 | Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | | | |
| 2 | 101 | product A | Electronics | 120 | 130 | 140 | 150 | 160 | | | |
| 3 | 102 | product B | Furniture | 150 | 160 | 170 | 180 | 190 | | | |
| 4 | 103 | product C | Electronics | 200 | 210 | 220 | 230 | 240 | | | |
| 5 | | | | | | | | | | | |
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Formula: (sales for Product C in March)
=INDEX(' Worksheet '!A4:H4,MATCH(' Worksheet '!F4,' Worksheet '!A4:H4,0))

2. Use INDEX and MATCH to find the category for Product E.

lab 3 index vs match assignment - Microsoft

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| | A | B | C | D | E | F | G | H | I |
|----|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|---|
| 1 | Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | |
| 2 | 101 | product A | Electronics | 120 | 130 | 140 | 150 | 160 | |
| 3 | 102 | product B | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 4 | 103 | product C | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 5 | 104 | product D | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 6 | 105 | product E | Furniture | 220 | 230 | 240 | 250 | 260 | |
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| 12 | | | | | | | | | |

Formula: (category for Product E)
=INDEX(' Worksheet '!A6:H6, MATCH(' Worksheet '!C6,' Worksheet '!A6:H6,0))

3. Use INDEX and MATCH to find the maximum sales for Product B across all months.

lab 3 index vs match assignment - Microsoft Excel

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|----|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|---|---|---|---|
| 1 | Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | | | | | |
| 2 | 101 | product A | Electronics | 120 | 130 | 140 | 150 | 160 | max value | | | | |
| 3 | 102 | product B | Furniture | 150 | 160 | 170 | 180 | 190 | 190 | | | | |
| 4 | 103 | product C | Electronics | 200 | 210 | 220 | 230 | 240 | | | | | |
| 5 | 104 | product D | Clothing | 90 | 100 | 110 | 120 | 130 | | | | | |
| 6 | 105 | product E | Furniture | 220 | 230 | 240 | 250 | 260 | | | | | |
| 7 | 106 | product F | Electronics | 130 | 140 | 150 | 160 | 170 | | | | | |
| 8 | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | |

Formula: (maximum sales for Product B across all months)
 =MAX(INDEX(D2:H7,MATCH(B3,B2:B

4. Use INDEX and MATCH to find the month with the maximum sales for Product A.

lab 3 index vs match assignment - Microsoft Excel

| | A | B | C | D | E | F | G | H | I | J | K |
|----|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|------------------------------------|---|---|
| 1 | Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | month with max sales for product a | | |
| 2 | 101 | product A | Electronics | 120 | 130 | 140 | 150 | 160 | May Sales | | |
| 3 | 102 | product B | Furniture | 150 | 160 | 170 | 180 | 190 | | | |
| 4 | 103 | product C | Electronics | 200 | 210 | 220 | 230 | 240 | | | |
| 5 | 104 | product D | Clothing | 90 | 100 | 110 | 120 | 130 | | | |
| 6 | 105 | product E | Furniture | 220 | 230 | 240 | 250 | 260 | | | |
| 7 | 106 | product F | Electronics | 130 | 140 | 150 | 160 | 170 | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
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| 11 | | | | | | | | | | | |
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| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |

Formula: (month with max sales for product a)
 =INDEX(C1:H1,MATCH(MAX(INDEX(C2:H7,MATCH(B2:B7,0)),INDEX(C2:H7,MATCH(B2:B7,0),0)),0))

5. Use INDEX, MATCH, and SUMIF to sum the sales for all products in the "Electronics" category for April.

lab 3 index vs match assignment - Microsoft Excel

| | A | B | C | D | E | F | G | H | I |
|---|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|---|
| | Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | |
| 1 | 101 | product A | Electronics | 120 | 130 | 140 | 150 | 160 | Sum of sales for "electronics" category in april 540 |
| 2 | 102 | product B | Furniture | 150 | 160 | 170 | 180 | 190 | |
| 3 | 103 | product C | Electronics | 200 | 210 | 220 | 230 | 240 | |
| 4 | 104 | product D | Clothing | 90 | 100 | 110 | 120 | 130 | |
| 5 | 105 | product E | Furniture | 220 | 230 | 240 | 250 | 260 | |
| 6 | 106 | product F | Electronics | 130 | 140 | 150 | 160 | 170 | |

Formula: (Sum of sales for "electronics" category in april)
 =SUMIF(C2:C7,"Electronics",INDEX(D2:H7,0,MATCH(G1,D1:H1,0)))

6. Use INDEX and MATCH to calculate the average sales for Product D across all months.

lab 3 index vs match assignment - Microsoft Excel

| | A | B | C | D | E | F | G | H | I | J |
|---|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|---|---|
| | Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | | |
| 1 | 101 | product A | Electronics | 120 | 130 | 140 | 150 | 160 | Average sales for Product D across all months. 110 | |
| 2 | 102 | product B | Furniture | 150 | 160 | 170 | 180 | 190 | | |
| 3 | 103 | product C | Electronics | 200 | 210 | 220 | 230 | 240 | | |
| 4 | 104 | product D | Clothing | 90 | 100 | 110 | 120 | 130 | | |
| 5 | 105 | product E | Furniture | 220 | 230 | 240 | 250 | 260 | | |
| 6 | 106 | product F | Electronics | 130 | 140 | 150 | 160 | 170 | | |

Formula: (Average sales for Product D across all months.)
 =AVERAGE(INDEX(B2:H7,MATCH(B5,B2:B7,0),0))

7. Use INDEX and MATCH to find the sales for Product ID 105 in May.

lab 3 index vs match assignment - Microsoft Excel

| | A | B | C | D | E | F | G | H | I | J | K |
|----|------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|---------------------------------|---|---|
| 1 | Product ID | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | | | |
| 2 | 101 | product A | Electronics | 120 | 130 | 140 | 150 | 160 | | | |
| 3 | 102 | product B | Furniture | 150 | 160 | 170 | 180 | 190 | | | |
| 4 | 103 | product C | Electronics | 200 | 210 | 220 | 230 | 240 | | | |
| 5 | 104 | product D | Clothing | 90 | 100 | 110 | 120 | 130 | | | |
| 6 | 105 | product E | Furniture | 220 | 230 | 240 | 250 | 260 | Sales for Product ID 105 in May | | |
| 7 | 106 | product F | Electronics | 130 | 140 | 150 | 160 | 170 | 260 | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |

Formula: (Sales for Product ID 105 in May)
 =INDEX(D2:H7,MATCH(A6,A2:A7,0),MATCH(H1,D1:H1,0))

8. Use INDEX and MATCH to create a dynamic lookup where the user can input a product and a month, and the formula returns the corresponding sales

lab 3 index vs match assignment - Microsoft Excel

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R |
|--|-----------|-------------|-----------|-----------|-----------|-----------|-----------|---|---|-----------|-----------|-----------|-----------|-----------|-----------|---|---|---|
| | Product | Category | Jan Sales | Feb Sales | Mar Sales | Apr Sales | May Sales | | | Product | Jan Sales | Feb sales | Mar Sales | Apr Sales | May sales | | | |
| | product A | Electronics | 120 | 130 | 140 | 150 | 160 | | | product A | 120 | 130 | 140 | 150 | 160 | | | |
| | product B | Furniture | 150 | 160 | 170 | 180 | 190 | | | product B | | | | | | | | |
| | product C | Electronics | 200 | 210 | 220 | 230 | 240 | | | product C | | | | | | | | |
| | product D | Clothing | 90 | 100 | 110 | 120 | 130 | | | product D | | | | | | | | |
| | product E | Furniture | 220 | 230 | 240 | 250 | 260 | | | product E | | | | | | | | |
| | product F | Electronics | 130 | 140 | 150 | 160 | 170 | | | product F | | | | | | | | |

Formulas: (input product and month and the formula returns the corresponding sales)
 Product -----> use data validation (product A, product B,)

Jan sales : =INDEX(A1:G7,MATCH(J2,A1:A7,0),MATCH(K1,A1:G1,0))
 Feb Sales : =INDEX(A1:G7,MATCH(J2,A1:A7,0),MATCH(L1,A1:G1,0))
 Mar Sales : =INDEX(A1:G7,MATCH(J2,A1:A7,0),MATCH(M1,A1:G1,0))
 Apr Sales : =INDEX(A1:G7,MATCH(J2,A1:A7,0),MATCH(N1,A1:G1,0))
 May sales : =INDEX(A1:G7,MATCH(J2,A1:A7,0),MATCH(O1,A1:G1,0))