

Questions:-

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

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

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

| F10 | | fx | | =INDEX(D2:F7,MATCH(B4,B2:B7,0),MATCH("Mar Sales",D1:F1,0)) | | | | | | |
|-----|------------|---------|-------------|--|-----------|-----------|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J |
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | | | | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | | | | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | | | | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | | | | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | | | | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | | | | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | product | sales | | | | |
| 10 | | | | | Prod C | 220 | | | | |
| 11 | | | | | | | | | | |

Formula: =INDEX(D2:F7,MATCH(B4,B2:B7,0),MATCH("Mar Sales",D1:F1,0))

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

| | | | | | | | | |
|-----|------------|---------|-------------|---------------------------------|-----------|-----------|---|---|
| E11 | | fx | | =INDEX(C2:C7,MATCH(B6,B2:B7,0)) | | | | |
| | A | B | C | D | E | F | G | H |
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | product | sales | | | |
| 11 | | | | Prod E | furniture | | | |
| 12 | | | | | | | | |

Formula: =INDEX(C2:C7,MATCH(B6,B2:B7,0))

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

| D11 | | fx | | =MAX(INDEX(D2:F7,MATCH(B3,B2:B7,0),0)) | | | | | |
|-----|------------|---------|-------------|--|-----------|-----------|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | | | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | | | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | | | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | | | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | | | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | | | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | product | sales | | | | | |
| 11 | | | Prod B | 170 | | | | | |
| 12 | | | | | | | | | |

Formula: =MAX(INDEX(D2:F7,MATCH(B3,B2:B7,0),0))

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

| F12 | | =INDEX(D1:F1,MATCH(MAX(INDEX(D2:F7,MATCH("PROD A",B2:B7,0),0)),INDEX(D2:F7,MATCH("PROD A",B2:B7,0),0),0)) | | | | | | | | | | | | | |
|-----|------------|---|-------------|-----------|-----------|----------------|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | | | | | | | | | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | | | | | | | | | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | | | | | | | | | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | | | | | | | | | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | | | | | | | | | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | | | | | | | | | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |
| 11 | | | | | product | max sale month | | | | | | | | | |
| 12 | | | | | Prod A | mar sales | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | |

Formula: =INDEX(D1:F1,MATCH(MAX(INDEX(D2:F7,MATCH("PROD A",B2:B7,0),0)),INDEX(D2:F7,MATCH("PROD A",B2:B7,0),0),0))

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

E11

f_x

=SUMIF(C2:C7,"electronics",G2:G7)

| | A | B | C | D | E | F | G | H |
|----|------------|---------|-------------|-------------|-----------|-----------|-------------|---|
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | april sales | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | 120 | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | 150 | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | 100 | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | 130 | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | 140 | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | 100 | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | product | sales | | | |
| 11 | | | | electronics | 320 | | | |

Formula: =SUMIF(C2:C7,"electronics",G2:G7)

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

| E13 | | fx | | =AVERAGE(INDEX(D2:F7,MATCH(B5,B2:B7,0),0)) | | | | | |
|-----|------------|---------|-------------|--|-----------|-----------|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | | | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | | | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | | | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | | | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | | | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | | | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |
| 11 | | | | | | | | | |
| 12 | | | | product | sales | | | | |
| 13 | | | | Product D | 100 | | | | |
| 14 | | | | | | | | | |

Formula: =AVERAGE(INDEX(D2:F7, MATCH(B5, B2:B7, 0), 0))

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

| E11 | | fx | | =INDEX(H2:H7,MATCH(105,A2:A7,0)) | | | | | |
|-----|------------|---------|-------------|----------------------------------|-----------|-----------|-------------|-----------|---|
| | A | B | C | D | E | F | G | H | I |
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | april sales | may sales | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | 120 | 130 | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | 150 | 20 | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | 100 | 170 | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | 130 | 120 | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | 140 | 65 | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | 100 | 180 | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | product | sales | | | | |
| 11 | | | | Prod ID -105 | 65 | | | | |
| 12 | | | | | | | | | |

Formula: =INDEX(H2:H7,MATCH(105,A2:A7,0))

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.

| F11 | | =INDEX(D2:H7,MATCH(D11,B2:B7,0),MATCH(E11,D1:H1,0)) | | | | | | | | | |
|-----|------------|---|-------------|-----------|-----------|-----------|-------------|-----------|---|---|--|
| | A | B | C | D | E | F | G | H | I | J | |
| 1 | Product ID | Product | category | jan sales | feb sales | mar sales | april sales | may sales | | | |
| 2 | 101 | PROD A | Electronics | 120 | 130 | 140 | 120 | 130 | | | |
| 3 | 102 | PROD B | furniture | 150 | 160 | 170 | 150 | 20 | | | |
| 4 | 103 | PROD C | Electronics | 200 | 210 | 220 | 100 | 170 | | | |
| 5 | 104 | PROD D | clothing | 90 | 100 | 110 | 130 | 120 | | | |
| 6 | 105 | PROD E | furniture | 220 | 230 | 240 | 140 | 65 | | | |
| 7 | 106 | PROD F | Electronics | 130 | 140 | 150 | 100 | 180 | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | Product | Month | Sales | | | | | |
| 11 | | | | PROD B | feb sales | 160 | | | | | |
| 12 | | | | | | | | | | | |

Formula: =INDEX(D2:H7,MATCH(D11,B2:B7,0),MATCH(E11,D1:H1,0))