| Order id | product | price |
|---|---|---|
| 101 | product A | 120 |
| 102 | product B | 150 |
| 103 | product C | 200 |
| 104 | product D | 90 |
| 105 | product E | 220 |
| | | |
| 106 | product F | 130 |

Q1. Use VLOOKUP to find the product names for each Product ID in the Orders worksheet.

Solution-

 Step1:- Worksheet2 create a new column next to product id called product name

Step 2:- In the first row in the new column(D17) For the following  formula

## =VLOOKUP(D17,Sheet15!$B$3:$D$8,2,0)

Before is the Product id in the order worksheet **Sheet15!$B$3:$D$8** that  is the range where Product id and Product name located

To indicates the column index number and 0 is for exact match.

| Order id | Product  id | product name | Quantity | total price |
|---|---|---|---|---|
| 1 | 101 | Product A | 2 | |
| 2 | 103 | Product C | 1 | |
| 3 | 105 | Product E | 4 | |
| 4 | 106 | Product F | 3 | |
| 5 | 102 | Product B | 5 | |
| 6 | 104 | Product D | 6 | |

Q2.Use VLOOKUP to find the price for each Product  ID in the Orders worksheet,then calculate the Total price by multiplying the quantity by the Product Price .

Solution:-

Step 1:- In  worksheet2 create a new column called price

Step 2  In the first row in the new column (F4) write the following formula

## =VLOOKUP(D17,sheet10!$B$3:$D$17,3,0)

D17 is the product id in the order worksheet three refers to the third column (Price worksheet10) in the product worksheet

Step 3:-In the total price column calculate the total price by multiplying the price and quantity

=(F4*G4)

| Order id | Product id | product name | Price | Quantity | total price |
|---|---|---|---|---|---|
| 1 | 101 | Product A | 120 | 2 | 240 |
| 2 | 103 | Product C | 200 | 1 | 400 |
| 3 | 105 | Product E | 220 | 4 | 880 |
| 4 | 106 | Product F | 130 | 3 | 260 |
| 5 | 102 | Product B | 150 | 5 | 750 |
| 6 | 104 | Product D | 90 | 6 | 540 |

Q3:- Use VLOOKUP to check if there are any ProductID in the Orders worksheet that do not exist in the Products worksheet.

Solution:-

Step1:-In worksheet 2 Product Id in product table add a new record with the product id which is not present in product table then

Step 3 In the first row of the new column with the formula

=IF(ISNA(VLOOKUP(D17,Sheet10!$B$3:$D$8,1,0)),"NOT FOUND","FOUND")

| Order id | Product id | product name | Price | Quantity | total price |
|---|---|---|---|---|---|
| 1 | 101 | Product A | 120 | 2 | 240 |
| 2 | 103 | Product C | 200 | 1 | 400 |
| 3 | 105 | Product E | 220 | 4 | 880 |
| 4 | 106 | Product F | 130 | 3 | 260 |
| 5 | 102 | Product B | 150 | 5 | 750 |
| 6 | 104 | | 90 | 6 | 540 |
| 7 | 107 | | | | |

Q4. Assume a discount of 10% is given on all products. Use VLOOKUP to find the original price and then calculate the discounted price.

Solution:-

Step1 :- In worksheet2 create a new column is called discounted price

Step2 :- In the first row of the new column tha J4 use the following formula

=F4*(1-0.1) where F4 is the price

| Order id | Product id | product name | Price | Quantity | total price | Product ID in Product table | Discounted price |
|---|---|---|---|---|---|---|---|
| 1 | 101 | Product A | 120 | 2 | 240 | Found | 108 |
| 2 | 103 | Product C | 200 | 1 | 400 | Found | 180 |
| 3 | 105 | Product E | 220 | 4 | 880 | Found | 198 |
| 4 | 106 | Product F | 130 | 3 | 260 | Found | 117 |
| 5 | 102 | Product B | 150 | 5 | 750 | Found | 135 |
| 6 | 104 | | 90 | 6 | 540 | Found | 81 |
| 7 | 107 | | | | | Not Found | 0 |

Q 5. Use VLOOKUP to find the price for each Product ID and then calculate the order value. Find the maximum order value from the list.

Step1:-Use the VLOOKUP formula from question 2 to get the total price

Step2:- Use the following Formula:-

**=MAX(H4:H9)**

Q6. Use VLOOKUP to find out which products from the Products worksheet have not been ordered.

Step1:- add a record in product table that is not in order table

Step2:- Create a new column named for called product ordered or not

Step3:- In the first of the new column, the following foemula is:-

**=IF(ISNA(B3,VLOOKUP2!$D$4:$J$10,1,0)),"Not ordered","Ordered")**

| Order id | product | price | Product ordered or not |
|---|---|---|---|
| 101 | product A | 120 | Ordered |
| 102 | product B | 150 | Ordered |
| 103 | product C | 200 | Ordered |
| 104 | product D | 90 | Ordered |
| 105 | product E | 220 | Ordered |
| 106 | product F | 130 | Ordered |
| 108 | Product G | 150 | Not Ordered |