| 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**.

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,Sheet1!$B$3:$D$8,2,0)"**

Before is the Product id in the order worksheet" **Sheet1!$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.

| S.No | Product ID | Product Name | 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 .**

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,sheet3!$B$3:$D$17,3,0)".**

Where 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)".**

| Product ID | Product Name | Price | Quantity | Total Price |
|---|---|---|---|---|
| 101 | Product A | 120 | 2 | 240 |
| 103 | Product C | 200 | 1 | 400 |

| | | | | | |
|---|---|---|---|---|---|
| 105 | Product E | 220 | 4 | | 880 |
| 106 | Product F | 130 | 3 | | 260 |
| 102 | Product B | 150 | 5 | | 750 |
| 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.**

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 2  In the first row of the new column with the formula
**"=IF(ISNA(VLOOKUP(D17,Sheet3!$B$3:$D$8,1,0)),"NOT FOUND","FOUND")"**

| Product ID | Product Name | Price | Quantity | Total Price | Found Or Not |
|---|---|---|---|---|---|
| 101 | Product A | 120 | 2 | 240 | Found |
| 103 | Product C | 200 | 1 | 400 | Found |
| 105 | Product E | 220 | 4 | 880 | Found |
| 106 | Product F | 130 | 3 | 260 | Found |
| 102 | Product B | 150 | 5 | 750 | Found |
| 104 | Product D | 90 | 6 | 540 | Found |
| 107 | | | | | Not Found |

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

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

| Product Id | Product Name | Price | Quantity | Total Price | Found or not | Discounted price |
|---|---|---|---|---|---|---|
| 101 | Product A | 120 | 2 | 240 | Found | 108 |
| 103 | Product C | 200 | 1 | 400 | Found | 180 |
| 105 | Product E | 220 | 4 | 880 | Found | 198 |
| 106 | Product F | 130 | 3 | 260 | Found | 117 |
| 102 | Product B | 150 | 5 | 750 | Found | 135 |
| 104 | | 90 | 6 | 540 | Found | 81 |
| 107 | | | | | Not Found | 0 |

Step2  :- In the first row of the new column J4 use the following formula**"=H4*(1-0.1)"**  where H4 is the price.

**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)**"

| Product ID | Product Name | Price | Quantity | Total Price |
|---|---|---|---|---|
| 101 | Product A | 120 | 2 | 240 |
| 103 | Product C | 200 | 1 | 400 |
| 105 | Product E | 220 | 4 | 880 |
| 106 | Product F | 130 | 3 | 260 |
| 102 | Product B | 150 | 5 | 750 |
| 104 | Product D | 90 | 6 | 540 |

**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")**

| Product Id | Product Name | 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 |