|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  | **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** | **Product ID in Product table** |
| 1 | 101 | Product A | 120 | 2 | 240 | Found |
| 2 | 103 | Product C | 200 | 1 | 400 | Found |
| 3 | 105 | Product E | 220 | 4 | 880 | Found |
| 4 | 106 | Product F | 130 | 3 | 260 | Found |
| 5 | 102 | Product B | 150 | 5 | 750 | Found |
| 6 | 104 |  | 90 | 6 | 540 | Found |
| 7 | 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.

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 |

**Q7.** Use VLOOKUP to find the Product name and summarize the total quantity sold for each product.

Step 1: Use VLOOKUP to Find the Product Name

Step2: Formula =IF(VLOOKUP(B2, $J$2:$K$7, 2, FALSE), "")

Step 3: Summarize the Total Quantity Sold for Each Product

**Example:**

| **Product Name** | **Total Quantity Sold** |
| --- | --- |
| Product A | 2 |
| Product B | 5 |
| Product C | 1 |
| Product D | 6 |
| Product E | 4 |
| Product F | 3 |