

ADVANCE EXCEL ASSIGNMENT 14

Dataset:

https://docs.google.com/spreadsheets/d/1ZoA4gnlLOQxpU8qgpkTJPJCS8cQBmNzKVirJ_Ow0w/e/dit?usp=sharing

Use the above dataset and answer the following questions. Assume that a gang is trying to loot Diamonds and Soft drinks being exported from India

1. How much Diamonds were looted from Chennai Port Trust?

To get the total amount of diamond looted from Chennai Port Trust, use SUMIF() function as follows:

=SUMIF(C2:C59,"=Chennai Port Trust",D2:D59)

	A	B	C	D	E	F	G	H	I	J	K	L
	Date	Type of attack	Location of attack	Diamonds looted (in ounces)	Soft drinks looted (in gallons)	Soft Drinks Consumed	Soft Drinks Consumed (in gallons)		Question Number	Question	Answer	
2	27-10-1962	Port	Deendayal Port Trust	334	3864	1236.48	326.64					
3	18-11-1962	Ship/to/Ship	Chennai	246	3305	1454.2	384.16		1	Sum of diamonds that were looted from Chennai Port Trust	7182	
4	27-11-1962	Port	Paradip Port Trust	571	2396	1078.2	284.83					
5	03-02-1962	Port	Jawaharlal Nehru Port Trust	1106	2970	1188	313.84		2	Count of Ships that were looted near Paradip Port Trust and Chennai Port Trust	6	
6	04-11-1963	Ship/to/Ship	Paradip Port Trust	986	3275	1015.25	268.2					
7	09-03-1963	Port	Visakhapatnam Port Trust	2450	840	336	88.76		3	sum total of Diamonds looted from the V.O. Chidambarnar port trust	9887	
8	28-11-1964	Ship/to/Ship	Bay of bengal	1257	1345	538	142.12					
9	05-11-1964	Ship/to/Ship	Mumbai Port Trust	2659	3073	1229.2	324.72		4.a	Average amount of Diamonds looted	1254.86 ounces	
10	27-04-1964	Ship/to/Ship	Syama Prasad Mookerjee Port Trust	2685	2294	917.6	242.4		4.b	Average amount of Soft drinks looted	2227.76 gallons	
11	28-07-1964	Ship/to/Ship	Chennai Port Trust	2372	1355	596.2	157.5					
12	18-08-1964	Port	Deendayal Port Trust	261	2389	955.6	252.44		5	Ratio of soft drinks drunk to soft drinks looted	4307:446.03	

Sum of diamonds that were looted from Chennai Port Trust = **7182**

2. How many Ships were looted near Paradip Port Trust and Chennai Port Trust?

To get the count of ships that were looted near Paradip Port Trust and Chennai Port Trust, we need to use the COUNTIFS formula with OR condition by using “+” sign between the two conditions with ship as a common criteria. It can be written as follows:

=COUNTIFS(B2:B59,"="&B3,C2:C59,"="&C4)+COUNTIFS(B2:B59,"="&B3,C2:C59,"="&C11)

Here the criteria are given as cell references. Cell B3 contains “Ship/to/ship” , C4 contains “Paradip Port Trust” and C11 contains “Chennai Port Trust”.

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Calibri (Body) 11 B General \$ 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00											
K5 =COUNTIFS(B2:B59,"="&B3,C2:C59,"="&C4)+COUNTIFS(B2:B59,"="&B3,C2:C59,"="&C11)											
	A	B	C	D	E	F	G	H	I	J	K
	Date	Type of attack	Location of attack	Diamonds looted (in ounces)	Soft drinks looted (in gallons)	Soft Drinks Consumed	Soft Drinks Consumed (in gallons)		Question Number	Question	Answer
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6	09-03-1963	Port	Visakhapatnam Port Trust	2450	840	336	88.76	3		sum total of Diamonds looted from the V.O. Chidambarnar port trust	9887
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10	28-07-1964	Ship/to/Ship	Chennai Port Trust	2372	1355	596.2	157.5				
11	18-08-1964	Port	Deendayal Port Trust	261	2389	955.6	252.44	5		Ratio of soft drinks drunk to soft drinks looted	4307:446.03

Count of Ships that were looted near Paradip Port Trust and Chennai Port Trust = 6

3. What is the sum total of Diamonds looted from the V.O. Chidambarnar port trust?

To get the total number of Diamonds looted from the V.O. Chidambarnar port trust, we can use SUMIF() function as follows:

=SUMIF(C2:C59,"="&C58,D2:D59)

where C58= V.O. Chidambarnar port trust

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Calibri (Body) 11 B General \$ 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00											
K7 =SUMIF(C2:C59,"="&C58,D2:D59)											
	A	B	C	D	E	F	G	H	I	J	K
	Date	Type of attack	Location of attack	Diamonds looted (in ounces)	Soft drinks looted (in gallons)	Soft Drinks Consumed	Soft Drinks Consumed (in gallons)		Question Number	Question	Answer
1	27-10-1962	Port	Deendayal Port Trust	334	3864	1236.48	326.64				
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11	18-08-1964	Port	Deendayal Port Trust	261	2389	955.6	252.44	5		Ratio of soft drinks drunk to soft drinks looted	4307:446.03

Total of Diamonds looted from the V.O. Chidambarnar port trust = 9887

4. What is the average amount of Diamonds and Soft drinks looted?

We can use AVERAGE() function to calculate the average of numbers from a range of cells. The given data set contains the amount of diamonds in ounces(mass) and amount of soft drinks looted in gallons(liquid). Since both the items are of different units, the conversion is not possible and the average of each item is calculated separately as shown below:

The formula used to find the average of diamonds looted is :

=ROUND(AVERAGE(D2:D59),2)

The ROUND() function is used to get the average value with 2 number precisions.

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Calibri (Body) 11 B General \$ 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00											
K9 =ROUND(AVERAGE(D2:D59),2)&" ounces"											
	A	B	C	D	E	F	G	H	I	J	K
1	Date	Type of attack	Location of attack	Diamonds looted (in ounces)	Soft drinks looted (in gallons)	Soft Drinks Consumed	Soft Drinks Consumed (in gallons)		Question Number	Question	Answer
2	27-10-1962	Port	Deendayal Port Trust	334	3864	1236.48	326.64				
3	18-11-1962	Ship/to/Ship	Chennai	246	3305	1454.2	384.16		1	Sum of diamonds that were looted from Chennai Port Trust	7182
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12	18-08-1964	Port	Deendayal Port Trust	261	2389	955.6	252.44		5	Ratio of soft drinks drunk to soft drinks looted	4307:446.03

Average amount of Diamonds looted= **1254.86 ounces**

The formula used to find the average of diamonds looted is :

=ROUND(AVERAGE(E2:E59),2)

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Calibri (Body) 11 B General \$ 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00											
K10 =ROUND(AVERAGE(E2:E59),2)&" gallons"											
	A	B	C	D	E	F	G	H	I	J	K
1	Date	Type of attack	Location of attack	Diamonds looted (in ounces)	Soft drinks looted (in gallons)	Soft Drinks Consumed	Soft Drinks Consumed (in gallons)		Question Number	Question	Answer
2	27-10-1962	Port	Deendayal Port Trust	334	3864	1236.48	326.64				
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Average amount of Soft drinks looted = **2227.76 gallons**

5. What is the ratio of soft drinks drunk to soft drinks looted?

To find the ratio, there is no formula in excel. So, we need to use formula with SUM and GCD. SUM() function is used to find the total amount of each item and GCD() function is used to find the greatest common divisor of the two items.

Also in the given dataset, the “soft drinks looted” is given in gallons and no units is given for “Soft drinks consumed”. Here, we assume that the latter is in liters and is converted into gallons using CONVERT() function before calculating the ratio.

The convert function to convert the unit of “Soft drinks consumed” is used as follows:

=ROUND(CONVERT(F2,"lt","gal"),2)

Round function is used to limit the number of decimal points to 2.

Next, we can use the formula to find the ratio:

Ratio = number1/GCD(number1,number2) : number2/GCD(number1,number2)

The ratio is calculated using the formula as follows:

=ROUND(SUM(E2:E59)/GCD(SUM(E2:E59),SUM(G2:G59)),2)&":"&ROUND(SUM(G2:G59)/GCD(SUM(E2:E59),SUM(G2:G59)),2)

where SUM() gives the total amount of each item and GCD() gives the greatest common divisor of two items.

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K12 =ROUND(SUM(E2:E59)/GCD(SUM(E2:E59),SUM(G2:G59)),2)&":"&ROUND(SUM(G2:G59)/GCD(SUM(E2:E59),SUM(G2:G59)),2)											
	A	B	C	D	E	F	G	H	I	J	K
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Ratio of soft drinks drunk to soft drinks looted = **4307 : 446.03**