JAVA Assignments

1. Write a program that accepts the unit weight of a bag of coffee in pounds and the number of bags sold and displays the total price of the sale, computed as

totalPrice = unitWeight * numberOfUnits * 5.99;

totalPriceWithTax = totalPrice + totalPrice * 0.0725;

where 5.99 is the cost per pound and 0.0725 is the sales tax.

Display the result in the following manner:

Number of bags sold: 32

Weight per bag: 5 lb

Price per pound: $5.99

Sales tax: 7.25%

Total price: $ 1027.884

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2. A perfect number is a positive integer that is equal to the sum of its proper divisors. A proper divisor is a positive integer other than the number itself that divides the number evenly (i.e., no remainder).

For example, 6 is a perfect number because the sum of its proper divisors 1, 2, and 3 is equal to 6. Eight is not a perfect number because $1 + 2 + 4 <> 8$.

Write a program that accepts a number between 20 and 30 and determines whether the number is perfect. Also, display all proper divisors of the number.

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3. Take the number of students in a class as input.

For each student, input their name and marks obtained in a subject.

If marks>80: grade=A, if marks>60: grade=B, if marks>40, grade=C, else grade D.

Output the name and grade for each student. Also output the average marks of the class.

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4. Display the following pattern

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5. Display the following pattern

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  ***
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*****
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6. Enter number of rows from the user and display a diamond shaped pattern

Example: For number of rows=5

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  *
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*****
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  *
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