01 **If 2r = 5s and 5s = 6t, what does r equal in terms of t ?**

Your solution here:

02 **A total of k passengers went on a bus trip. Each of the n buses that were used to transport the passengers could seat a maximum of x passengers. If one bus had 3 empty seats and the reamining buses were filled, what is the relationship among n, x and k ?**

Your solution here:

03 **Answer each of the following**

(a) **For any positive integer n, $0^n = 0$ and $1^n = 1$. Explain.**

(b) **Study the given figure. Explain why the second and third powers of *x* are called "*x* squared" and "*x* cubed."**

(c) **Find a value of *x* and a value of *y* for which $x + y = x - y$ is a true statement. Make a generalization about the statement $x + y = x - y$.**

Your solution here:

04 Answer each of the following

(a) What are the steps in evaluating an algebraic expression for a quantity when you know the values of the variables involved ?

(b) To evaluate an expression with the variables a and b, how many number would you have to substitute ? Could you substitute the same value for both a and b ?

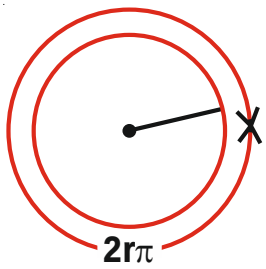
(c) The circumference and area of a circle of radius r are given by $2\pi r$ and πr^2, respectively. Use 3.14 for the constant π.

(i) What is the circumference of a circle with a radius of 2m ?

(ii) What is the area of a circle with a radius of 2m ?

(iii) The earth has a radius of 3960 miles.

Approximately how long is the equator ?



(d) Mona bought 70 bottles of lotion at Rs. 50 per bottle for her boutique. The regular price at her boutique is 40% over her cost. Write an expression that gives the value of each quantity.

(i) The regular price of a bottle of lotion at Mona's boutique

(ii) The amount Mona spent in buying the 70 bottles of lotion.

(iii) How much money will Mona make from selling three-fifths of the total number of bottles of lotion ?

Your solution here: