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**Applications of Simple Equations to Practical Situations**

Simple equations can be used to solve problems in real life. The method is first to form equations corresponding to such situations and then to solve those equations to give the solution to the problems.

Problem: Maya, Madhura and Mohsina are friends studying in the same class. In a class test in geography, Maya got 16 out of 25. Madhura got 20. Their average score was 19. How much did Mohsina score?



The value that is not known or has to be found is assigned a variable.

So, let the marks scored by Mohsina = x

Marks scored by Maya =16

Marks scored by Madhura =20

Total marks scored by all three = 16+20+x = 36 + x

Average marks scored by all three = 19

Average marks = total marks/3

Total marks/3= 19

Total marks =19\*3 = 57

Total marks scored by all three = 16+20+x = 36 + x

36 + x =57

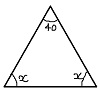
Transposing 36 will make it -36.

X = 57 -36

X =21

Hence the marks scored by Mohsina are 21 out of 25.

Problem: In an isosceles triangle, the base angles are equal. The vertex angle is 40°. What are the base angles of the triangle? (Remember, the sum of three angles of a triangle is 180°).



In an isosceles triangle the base angles are equal.

Let the base angles be of x degrees each.

Sum of three angles of a triangle= 180°

40 + x +x = 180

40 + 2x = 180

Now, transposing 40 will make it -40.

2x = 180 -40

2x = 140

Now again transposing \*2 will make it /2.

x=140/2

x=70

Thus the base angles are of 70 degrees each.

Problem : Ibenhal thinks of a number. If she adds 19 to it and divides the sum by 5, she will get 8.



Let the number thought by Ibenhal = k.

Adding 19 to this and dividing the sum by 5 she gets 8.

(k+19)/5 =8

Transposing /5 will make it \*5.

(k+19) = 40

Transposing +19 will make it -19.

k= 40-19

k= 21

hence the number thought of by  Ibenhal is 21.