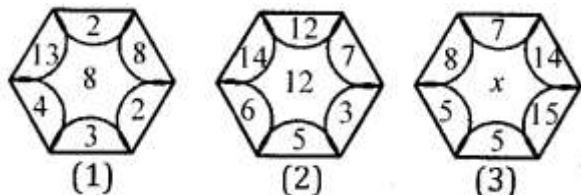


Control + Patience + Confidence = 100 % Success

1.

a) Find the relation between the numbers in fig. one and two and then find the value of x in the third figure.



b) 'O' is the centre of a circle with radius 3.5 cm, A and B are two points on the circle such that $m \angle AOB = 100^\circ$, then draw tangents to this circle at A and B which intersect at point 'P' then write the measure of $\angle APB$.

2.

a) A milkman bought 126 liter of milk at the rate of Rs. 40 per liter. He draws some milk from it and adds quantity of water equal to quantity of milk drawn and hence ratio of milk and water in that mixture becomes 17:4 . Then find the amount of milk drawn. If he sells the quantity of milk drawn and quantity of mixture of milk and water at the same rate. Then find the total profit in that transaction.

b) Find the value of x

$$\frac{7.5^3 - (-13.5) + 22.5}{0.0045 \div 0.05}$$

3.

a) Find the smallest number such that when it is divided by 4, 5, 6, 7, 8 the remainders are respectively 3, 4, 5, 6, 7.

b) Father distributed Rs. 45000 among his four sons in such a way that if the part of the first is increased by Rs. 2000, part of the second is decreased by Rs. 2000, the part of the third is doubled and the part of the fourth is made half. Then the all amounts become equal. Then find the amount that each son will get.

4.

a) Write down three next numbers of the sequence 2, 11, 23, 41,

b) $a^2 - 2673 = b^2$ and a, b are natural numbers then find all the possible values of a and b.

5

a) Solve

[illegible]

b) A wooden toy in the form of a cone surmounted on a hemisphere. The diameter of the base of the cone is 6 cm and its height is 4 cm. Find the cost of painting the toy

at the rate of Rs. 7 per 100 cm^2 , $\left(\quad \right)$

6.

a) A number when divided by 13 the remainder is 10 and if the same number is divided by 7 the remainder is 4. If second quotient is double the first quotient then find the number.

b) If $a^2 + b^2 = 29$ and $ab = 10$ then find the values of a and b .

7.

a) If $(403)^2 = abc \times cba$ then find the value of a, b, c

b) Sum of the squares of seven consecutive natural numbers is 476 then find the numbers?

8 a) Simplify

$$\frac{5.7 \times + \times +}{15^2 -}$$

b) The difference between the external and internal surface areas of a cylindrical pipe is 44 cm^2 . If the metal used to prepare this pipe is 99 cm^3 then find the external and internal radius of that pipe.

There is simply no substitute for hard work when it comes to achieving success.

9.

a) The sum of length, breadth and height of a cuboid is 19 cm and the length of its diagonal is 11 cm. Find the expenditure to paint all the surface of the cuboid at the rate of Rs. 9 per square meter.

b) Simplify

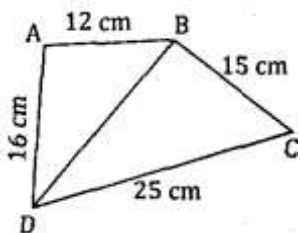
$$\left[\left(\frac{17.81 \div}{3} - \frac{2 \div 5}{6} \right) \right]$$

10.

a) If $p = 10^x$, $q = 10^y$ and $pq = 10^{\frac{11}{5}}$

When $x = \frac{9}{5}$, then find the value of y and $\frac{p}{q}$

b) A In the adjacent fig. In ABCD, $AB = 12 \text{ cm}$, $BC = 15 \text{ cm}$, $CD = 25 \text{ cm}$ and $AD = 16 \text{ cm}$, If $\triangle ABD \cong \triangle BCD$ then find (i) BD (ii) A



I can.
I will.
End of story.

There are no secrets to
SUCCESS
It is the result of preparation
HARD WORK
and
learning from failure