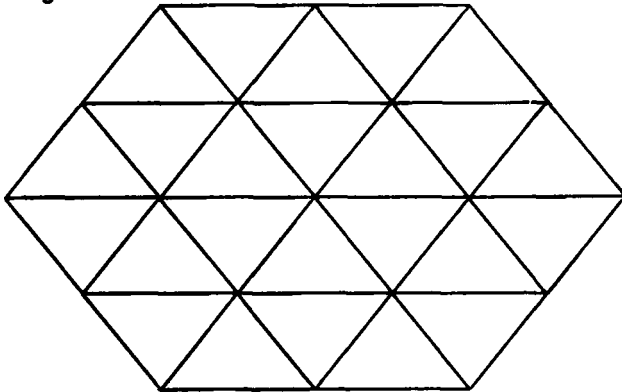


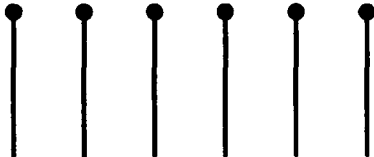
Puzzles

Compiled by Astabrata Kundu*

1. Can you prove $3 = 4$, logically?
2. How many triangles are there in the following figures?

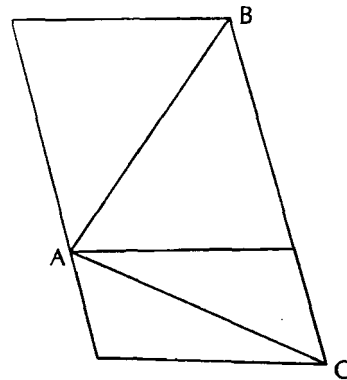


3. There are six matches as shown in figure. Now add five more matches to make nine.

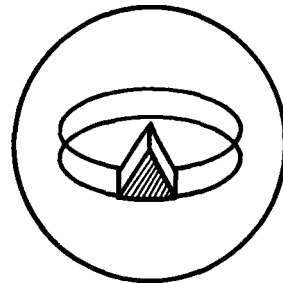


4. A man was born in the year 50 B.C. How old was he on his birthday in 50 A.D.?
5. Can you weigh 1 kg to 40 kg by using four weights only?
6. Can you tender a rupee note in such a way that there shall be fifty coins but none of the 2 paise coins?
7. At 6 o'clock the hands of a clock are exactly opposite to each other. When do they come opposite again?
8. Demonstrate how six sixes (cricket!) can equal a gross (twelve dozens)?
9. Can you make 1 (one) by using 9 three times?
10. Find the value of X and Y :
0, 1, 2, 2, 6, 4, 12, 9, X, Y, 30, 125

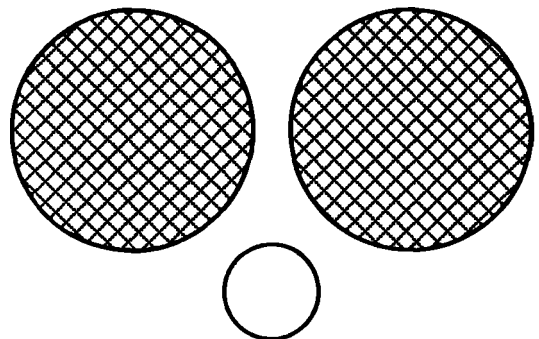
11. The day before yesterday I was 21 but next year I will be 24. Can you tell my date of birth and the date on which this statement was made?
12. Which of the diagonal is larger, AB or AC?



13. Where is the missing cake ? Find.



14. Can you make one circle disappear to you ?



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15. There are ten identical boxes, out of which nine boxes contain 10 identical blocks of 1 Kg each and one box contains 10 identical blocks of 1 Kg 100 gm each. And the hundred blocks are identical. Can you tell which box contains the

blocks of 1 Kg 100 gm using only one weighing? Standard weights are given to you.

16. What is the missing number?
0, 3, 14, 39, 84, *, 258

Solutions

1. We have $-12 = -12$ or, $9-21 = 16 - 28$

$$\text{or, } 3^2 - 7 \times 3 = 4^2 - 7 \times 4$$

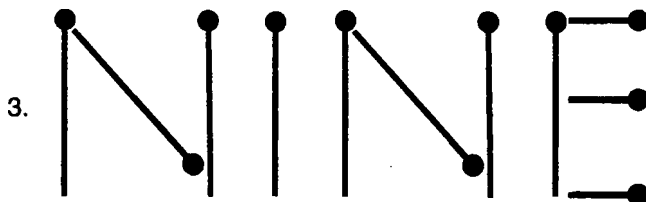
$$\text{or, } 3^2 - \frac{7}{2} \times 3 \times 2 = 4^2 - \frac{7}{2} \times 4 \times 2$$

$$\text{or, } 3^2 - \frac{7}{2} \times 3 \times 2 + \left(\frac{7}{2}\right)^2 = 4^2 - \frac{7}{2} \times 4 \times 2 + \left(\frac{7}{2}\right)^2$$

$$\text{or, } \left(3 - \frac{7}{2}\right)^2 = \left(4 - \frac{7}{2}\right)^2$$

$$\text{or, } 3 - \frac{7}{2} = 4 - \frac{7}{2} \Rightarrow 3 = 4$$

2. 38



4. 99 years, There is no year 0.

5. 1, 3, 9 and 27 Kg.

6. 45 one paise, 2 five paise, 2 ten paise and 1 twenty five paise.

7. $5 \frac{5}{11}$ minute past seven, $10 \frac{10}{11}$ minute past eight, $16 \frac{4}{11}$ minute past nine, $21 \frac{9}{11}$ minute past ten, $27 \frac{9}{11}$ minute past eleven, $32 \frac{8}{11}$ minute past twelve etc.

8. $144 = 66 + 66 + 6 + 6$

9. $1 = 9^{9-9}$

10. There are two alternate series starting with 0, 2, 6, 12 and 1, 2, 4, 9. Accordingly the value of X and Y are : $X = 20 = (4^2 + 4)$ and $Y = 28 = 4 + 4$.

11. Dec 31 and January 1st

12. Both are equal, but due to different angle AB appears longer. You can check with a ruler.

13. Turn the figure upside down, you will find the missing piece of cake. (effect of illusion).

14. Bring your nose close to the bottom ring. One of the black circle will disappear.

15. At first boxes are numbered from 1 to 10. Take 1 block from No. 1, 2 blocks from No. 2 and so on. Now take the weight of total 55 blocks with given standard weights. After subtracting 55 kg from the weight measured, divide it by 100 gm. The result is the required box number.

16. $155 = 5 + 5^2 + 5^3$.