## FUTURITE

## Sample Questions for Level 3 (class 5)

1. Compute the missing entry in Box A

2. The diagonals of a rhombus are 6 cm and 10 cm . What is the value of the side in cm ?
3. Find the unit digit of $2^{\wedge} 999 \quad$ [^ means exponent]
4. List all values of $c$ that make the equation below true

$$
|6 c-30|=12 \quad[|\mathrm{x}| \text { means modules, like }|-\mathrm{a}|=\mathrm{a} \text { or }|\mathrm{a}|=\mathrm{a}]
$$

5. Jack skip-counts out loud. The first three numbers she says can be represented by the expressions $n, n+7$ and $2 n$, in that order, If Jack continues his pattern, what is the next number he will say?
6. If there a number $N$ and we can break this $N$ into prime numbers like $N=a^{\wedge} p^{*} b^{\wedge} q^{*} c^{\wedge} r$ and the each prime no is called factor. The no of factors $=(p+1)(q+1)(r+1) \ldots . . .$.

Now find out the no. of factors of 72 using the above logic.
7. Match the 2D column with 3D column
2D 3D
a) Circle Cone
b) Semi-circle

Cube
c) Triangle

Sphere
d) Square

Regular Tetrahedron
e) Equilateral Triangle
8. How many maximum no of rectangles we can get from this figure?
9. If in a new mathematical system $76 \$ 34$ produces 4852 and 3248 ! 16 produces 302 , then what is the value of $(78 * 18)!2$ in this new mathematical system. Bracketed portion should be calculated first.
10. If a point is moving by keeping an equal distance from a fixed point, then tell us what is the shape of the trajectory of the moving point?

