 **Surface Area Worksheet**

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| If a rectangular box is opened:  1,2 = base or ends  3,5 = sides  4 = bottom or floor  6 = top or ceiling |

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| **Shape** | **Lateral Surface Area (LSA)** | **Total Surface Area (TSA)** |
| Cuboid | 2height(length + base) | 2(lb + bh + lh)=2Bh + (perimeter)(height) |
| Cube | 4a2 | 6a2 |
| Prism | Base perimeter × Height | LSA + 2 (area of one end) |
| Cylinder | 2πrh | 2πr(r + h) |

1. **Define the following terms:** 
   1. lateral surface area
   2. total surface area
   3. two-dimensional (2D)
   4. three-dimensional (3D)
2. **Draw the geometric shapes for the following objects:**
3. cuboid
4. cube
5. prism
6. cylinder

**Show the equation and solving of the following problems:**

1. The dimensions of a right rectangular prism are 4 inches by 5 inches by 6 inches. What is the surface area, in square inches, of the prism? (Convert to centimeters).
2. A cube has a surface area of 54 square meters. What is the volume, in cubic meters, of the cube? (Convert to centimeters).
3. A cubic prism has the dimensions of 4 inches by 4 inches and a height of 10 inches. What is the surface area? (Convert to centimeters).
4. Find the surface area of a right triangular prism with sides of 3 inches x 4 inches x 5 inches and a height of 12 inches. (Convert to centimeters).
5. What is the surface area of a cylinder with a radius of 3 inches and a height of 6 inches? (Convert to centimeters).