

Q.6. Create type solid_type with attributes length, width, height and 2 member functions surface and volume that returns the surface area and volume of the shape respectively. Create table solid of solid_type, insert records into it and display surface and volume of the solid.

SQL Query:

```
CREATE TYPE solid_type AS object(
    length FLOAT,
    width FLOAT,
    height FLOAT
);
```

```
CREATE TABLE solid (
    dimensions solid_type
);
```

```
INSERT INTO solid VALUES (solid_type(10, 5, 3));
INSERT INTO solid VALUES (solid_type(8, 6, 4));
INSERT INTO solid VALUES (solid_type(12, 7, 2));
```

```
SELECT
    s.dimensions.length,s.dimensions.width,s.dimensions.height,
    (2 * (s.dimensions.length * s.dimensions.width + s.dimensions.width * s.dimensions.height +
s.dimensions.height * s.dimensions.length)) AS surface_area,
    (s.dimensions.length * s.dimensions.width * s.dimensions.height) AS volume
FROM
    solid s;
```

DIMENSIONS.LENGTH	DIMENSIONS.WIDTH	DIMENSIONS.HEIGHT	SURFACE_AREA	VOLUME
10	5	3	190	150
8	6	4	208	192
12	7	2	244	168