

Examples of Functions in PL/SQL

```
CREATE FUNCTION circle_area (  
    p_radius IN NUMBER  
) RETURN NUMBER AS  
    v_pi    NUMBER := 3.1415926;  
    v_area  NUMBER;  
BEGIN  
    -- circle area is pi multiplied by the radius squared  
    v_area := v_pi * POWER(p_radius, 2);  
    RETURN v_area;  
END circle_area;
```

Tables: Products and Product_types exist in the database, and were created by the following CREATE statements:

```
CREATE TABLE product_types (  
    product_type_id INTEGER CONSTRAINT product_types_pk PRIMARY KEY,  
    type_name VARCHAR2(10) NOT NULL  
);
```

```
CREATE TABLE products (  
    product_id INTEGER CONSTRAINT products_pk PRIMARY KEY,  
    product_type_id INTEGER  
        CONSTRAINT products_fk_product_types  
        REFERENCES product_types(product_type_id),  
    Product_name VARCHAR2(30) NOT NULL,  
    Product_description VARCHAR2(50),  
    price NUMBER(5, 2) NOT NULL  
);
```

```
CREATE FUNCTION average_product_price (  
    p_product_type_id IN INTEGER  
) RETURN NUMBER AS  
    v_average_product_price NUMBER;  
BEGIN  
    SELECT AVG(price)  
        INTO v_average_product_price  
    FROM products  
    WHERE product_type_id = p_product_type_id;  
    RETURN v_average_product_price;  
END average_product_price;
```