

Create a function to calculate  $A \times B$

```
CREATE FUNCTION func(@a int, @b int)
```

```
RETURNS int
```

```
AS
```

```
BEGIN
```

```
RETURN (@a*@b)
```

```
END;
```

```
GO
```

```
SELECT dbo.func(5, 8)
```

```
-----  
→ 40
```

Create a function to calculate the area of a circle by diameter

$$\pi \times r^2 = \pi \times (D/2)^2 = \pi \times D^2/2^2 = \pi \times D^2/4 = \pi/4 \times D^2$$

```
CREATE FUNCTION dbo.CircleS (@D dec(6,3)) -- dbo.CircleS – create func like DB, @... variable introduced
```

```
RETURNS dec(6,3) -- return parameter: dec(6,3) – decimal number, 6 characters in total, 3 of 6 after «.»
```

```
BEGIN -- function start
```

```
RETURN (PI()/4)*POWER(@D, 2) -- the function itself
```

```
END -- function end
```

```
GO -- start of function execution
```

```
PRINT dbo.CircleS(15) -- action - display the function-DB, where the value of the variable = 15
```

```
-----  
→ 176.715 -- the result is decimal number, 6 characters in total, 3 of 6 after «.»
```

Create a function for determine odd/even numbers

```
CREATE FUNCTION funcA(@a int)
```

```
RETURNS varchar(30)
```

```
AS
```

```
BEGIN
```

```
DECLARE @res varchar(30)
```

```
IF (@a=0)
```

```
BEGIN
```

```
SET @res = 'This is zero, guys!'
```

```
END
```

```
ELSE IF (@a%2=0)
```

```
BEGIN
```

```
SET @res = 'Wow! Even!'
```

```
END
```

```
ELSE
```

```
BEGIN
```

```
SET @res = 'Wow! Odd!'
```

```
END
```

```
RETURN @res
```

```
END
```

```
GO
```

```
PRINT dbo.funcA(11)
```

```
-----  
→ Wow! Odd!
```

```
GO
```

```
PRINT dbo.funcA(12)
```

```
-----  
→ Wow! Even!
```

```
GO
```

```
PRINT dbo.funcA(0)
```

```
-----  
→ This is zero, guys!
```