Transposition and Toric Transposition

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Introduction

Rules for Transposition

- Axis will be changed from the 90 degree apart
- Cylinder sign will be changed
- Cylinder value will remain same
- Spherical power will be adjusted to cylinder value

Examples

A. +4.00 Ds / +4.00 Dcyl*90
   - Rule about Axis – Here, axis will be 180
   - Cylinder sign – Here, cylinder value will be in minus form
   - Cylinder value will be same
   - Spherical power will be adjusted to spherical value
   Here, [+4.00 + (+4.00)] = [+8.00]
   - So, final answer will be
     +8.00 Dsph / -4.00 Dcyl*180

B. +8.00 Dsh/-4.00 Dcyl*90
   - +8.00 + (-4.00)/ +4.00 *180
   - +(8.00) – (4.00) /+4.00*180
   - +4.00/+4.00*180

Toric Transposition

Example 1

First Step
Prescription cylinder sign will be matched with the base curve sign.
Eg:
Suppose: [Base curve = -6.00]
Prescription: -2.00/+5.00*180
Here, Base curve is in minus form and prescription cylinder is in plus form, so transposition is needed [1].
-2.00 + (+5.00)/-5.00*90
+3.00/-5.00*90

Second Step
Always minus will be done between Base curve and spherical power.
Here, spherical power is +3.00D and Base curve is -6.00D
+3.00 + 6.00
+9.00
It will be used on the tool.

Third Step
Base curve axis will be completely perpendicular to the final prescription axis (after transposed) [2].
So, -6.00*180

**Fourth Step**
Always addition will be done between Base Curve and cylinder [3].

So,
- BC = -6.00
- Cylinder = -5.00
- -6.00 + (-5.00)*90
- -6.00 - 5.00 * 90
- -11.00*90

**Final,**
+9.00

-6.00*180 / -11.00*90

**Example 2**
Prescription -3.00/+5.00*90
Base curve -6.00

**First Step**
Transpose the prescription so that base curve sign will be similar to the base curve sign
- +2.00/-5.00*180

**Second Step**
Minus should be done between spherical and base curve power.
- -6.00 – (+2.00)
- -6.00 - 2.00

-8.00
It will be used in a tool

**Third Step**
Base curve axis will be completely perpendicular with the prescription (which is transposed)
So, axis will be
- -6.00*90

**Fourth Step**
Add Base curve and cylinder power
- -6.00 + (-5.00)*180
- -11.00*180
So, final
-8.00

-6.00*90 / -11.00*180

**References**

2. Theodore Grosvenor, Theodore P Grosvenor (2007) Primary Care Optometry. 5th (Edn.).