SAWA UNIVERSITY

LECTURE TITLE

جامعة ساوة

كلية التقنيات الصحية والطبية

قسم تقنيات البصريات

المرحلة الرابعة

اسم المحاضر أ. حسين كاطع

رقم المحاضر 3

TRANSPOSITION

Transposition is the term applied to the method of Converting a prescription of lens power to another Possible optically equivalent lens power. Thus, by Transposition a prescription of convex cylindrical lens Can be converted to optically equivalent concave Cylindrical power, or vice versa.

i. Power of the spherical lens: Add the spherical and Cylindrical power algebraically, taking into account their Signs.
ii. Power of the cylindrical lens: Only change the sign of the Cylinder from plus (+) to minus (-), or vice versa. The Numerical strength of the cylinder remains the same.
iii. Axis of the cylinder: Change the axis by 90°. If the Original axis is at or less than 90°, add 90° to it. If the Original axis is over 90°, subtract 90° from it.

EXAMPLES
-3.00/+1.00 X 90
Rule i.- 3.00+ (+) 1.00 = -2.00 DSPH•

SPHERICAL EQUIVALENT

What is spherical equivalent ?
It is sometimes useful to calculate the power of the spherical lens of closest overall effect to a given contacat lens, known as the spherical equivalent. This reveals whether the eye is essentially hypermetropic, emmetropic or myopic. This consideration is especially important in the choice of intraocular lens power for the individual patient.
The spherical equivalent power is calculated from the toric lens prescription by algebraic addition of the spherical power and half the cylindrical power.

Why we need spherical equivalent ?
1-the patient are not comfortable for the prescription of glasses.
2- the prescription of contact lenses.
- Frist step take half of cylinder.
-2nd step Add cylinder in to sphere algebraically.
Ex. -2.00/-1.00 x90 = -2.5 D.SPH