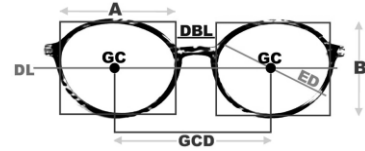


According to the Boxing System for frame measurements, the distance from the farthest outside edge of a lens, or lens opening, to the farthest inside edge of the opposite lens, or lens opening, is what measurement?



GCD or FPD

Explanation: This measurement represents the Geometrical Center Distance (**GCD**) which is more frequently called the Frame PD (FPD). However, this is odd since frames do not have pupils. Many argue that you should consider the depth of the eyewire groove when taking this measurement.

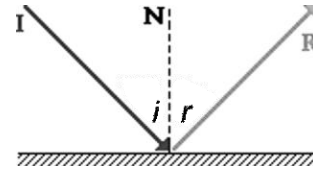


The Law of Reflection dictates that the angle of reflection is always equal to the angle of what?



Incidence

Explanation: The Law of Reflection states that the angle of incidence (*i*) and the angle of reflection (*r*) are always the same.



Rx: -0.75 +1.00 x 135 Add +2.50 – This prescription would be used to correct what distance refractive error?

- A. compound myopic astigmatism
- B. mixed astigmatism
- C. compound hyperopic astigmatism
- D. simple myopic astigmatism



B. mixed astigmatism

Explanation:

Step 1. Transpose the Rx

Step 2: Compare the signs of each sphere power

- Step 3: (Pl & -) Simple Myopic,
(Pl & +) Simple Hyperopic,
(- & -) Compound Myopic,
(+ & +) Compound Hyperopic,
(+ & -) Mixed

What is the name of the type of bridge, on a plastic frame, that is designed to spread the weight of the glasses evenly on both sides of the nose but not on the crest of the nose?



Keyhole Bridge

Explanation: The top inside of a keyhole bridge is shaped like an old-fashioned keyhole. From the top, it flares out slightly, resting on the sides of the nose, but not on the crest of the nose.

Keyhole Bridge



If a -2.00 is decentered 10mm,
how much prism is induced?



2.00^Δ

Explanation: Prentice's Law (sometimes called Prentice's Rule) is used to calculate induced prism and is expressed as $P=cD$ (P is prism, c is lens decentration in centimeters and D is lens power)
Convert 10mm to 1.00cm
So, $1.00 \times 2.00 = 2.00^{\Delta}$

Transpose this prescription
+1.25 -2.00 x 080



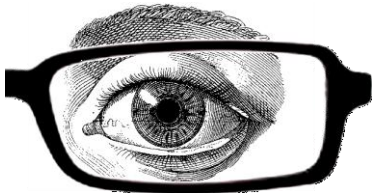
-0.75 +2.00 x 170

Explanation: Use the three steps of transposition:

- Step 1. Add the sphere and cylinder.
 $(+1.25) + (-2.00) = -0.75$
- Step 2. Change the sign of the cylinder.
Change -2.00 to +2.00
- Step 3. Change axis 90 degrees.
 $080 + 090 = 170$

What is the recommended segment height for a PAL for this patient?

Use PD Ruler Included



16mm

The fitting height for a progressive addition lens (FPL) is measured from the lowest point on the lens, or lens opening, to the center of the wearer's pupil.



+3.00 -2.00 x 125 will produce
a Circle of Least Confusion of
what?



+2.00

Explanation: The Circle of Least Confusion and the Spherical Equivalent of a prescription are always the same amount. Spherical Equivalent is calculated by taking half of the cylinder and adding it to the sphere power.
So, half of -2.00 is -1.00.
So, $(+3.00) + (-1.00) = +2.00$