Astigmatism Case 3

A 34-year-old female, at the phoropter, is beginning subjective refraction with the following prescription in one of her eyes: -3.50 + 0.50 × 180°.

The spherical correction in Step 1 is determined to be -3.00, and in Step 2, the axis remains unchanged. (See *The Four Steps of Subjective Refraction* on page 33.)

You begin modifying the cylinder power of +0.50 × 180 with the Jackson cross cylinder, and she says the choice with the red dot is clearer. Therefore, you lessen the cylinder power to +0.25 × 180°.

On the next series, she again chooses the red dot and you lessen the cylinder power to 0.00 × 180°, and add +0.25 power to the sphere.

On the next sequence of choices she once again chooses the red dot, but **you are working with plus cylinders and cannot go any lower**. **What can you do?**

Answer

The patient is choosing less plus cylinder power when the cylinder power is already at 0 and therefore cannot go any lower. This dilemma is resolved by understanding that the patient is actually choosing plus cylinder power 90 degrees away. In this case, change the axis from 180 degrees to 90 degrees, dial in +0.50 diopter of cylinder power at 90 degrees, adjust the sphere by 0.25 diopter, and then begin again to refine cylinder axis and power. (See *The Rule* below.)

> ### Note
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> The Rule: **If a patient chooses "less than 0" cylinder power**, the axis should be shifted 90 degrees from its current location. This applies to both the plus and minus cylinder methods. (See *Sixteen Tips for Accurate Subjective Refraction Results, Tip 9* on page 64.)