9. The relations of the axes in these tri-polar forms or octahedrons, may also be calculated from the measured inclinations over a front and middle edge, or over a side and middle edge, as shown below. The student should work out these formulæ (from the angles given at the commencement of § 8) for the three sulphur forms: P, $\frac{1}{3}$P, $\frac{1}{5}$P.

1. Given the inclination over a front edge = 2 *A*, and the inclination over a middle edge = 2 *D*: required x and $\breve{x}$; $\bar{x}$ being unity.

To obtain $\breve{x}$, (see Fig. 14):

Log cos a=[(log cos *A*)+10]−log sin *D*;
Log $\breve{x}$ = (log cot a)−10.

To obtain x, (see Fig. 14):

Log cos d=[(log cos *D*)+10]−log sin *A*;
Log x=[(log tan. d)+log $\breve{x}$]−10.

2. Given the inclination over a side edge = 2 *B*, and the inclination over a middle edge = 2 D: required x and $\breve{x}$; $\bar{x}$ being unity.

To obtain $\breve{x}$, (see Fig. 15);

Log cos b=[(log cos *B*)+10]−log sin *D*;
Log $\breve{x}$ = log tan b,−10.

To obtain x, (see Fig. 15):

Log cos d=[(log cos *D*+10)]−log sin *B*;
Log x=(log tan d)−10.

10. Figure 16 represents a crystal of Topaz, containing the following forms:

The Base, B=x, ∞^{-}, $\infty\breve{x}$.

Polar Forms.
- A polar or octahedron, P=x, $\bar{x}$, $\breve{x}$.
- A second polar, $\frac{2}{3}$P=$\frac{2}{3}x$, $\bar{x}$, $\breve{x}$.
- Another polar, belonging to the vertical zone of V2= $\frac{3}{2}$P2=$\frac{3}{2}x$, $\bar{x}$, $2\breve{x}$.
- A side-polar, or brachydome, $\breve{\text{P}}=x$, $\bar{x}\ \infty\ \breve{x}$.
- A second side-polar, $2\breve{\text{P}}=2x$, $\bar{x}$, $\infty\ \breve{x}$.

Vertical Forms:
- A vertical prism, V= ∞x, $\bar{x}$, $\breve{x}$.
- A second vertical prism V2= ∞x, $\bar{x}$, $2\breve{x}$.

Although these forms may be recognised by the simple inspection of the crystal, as polars, side-polars, &c., their indices (or axial