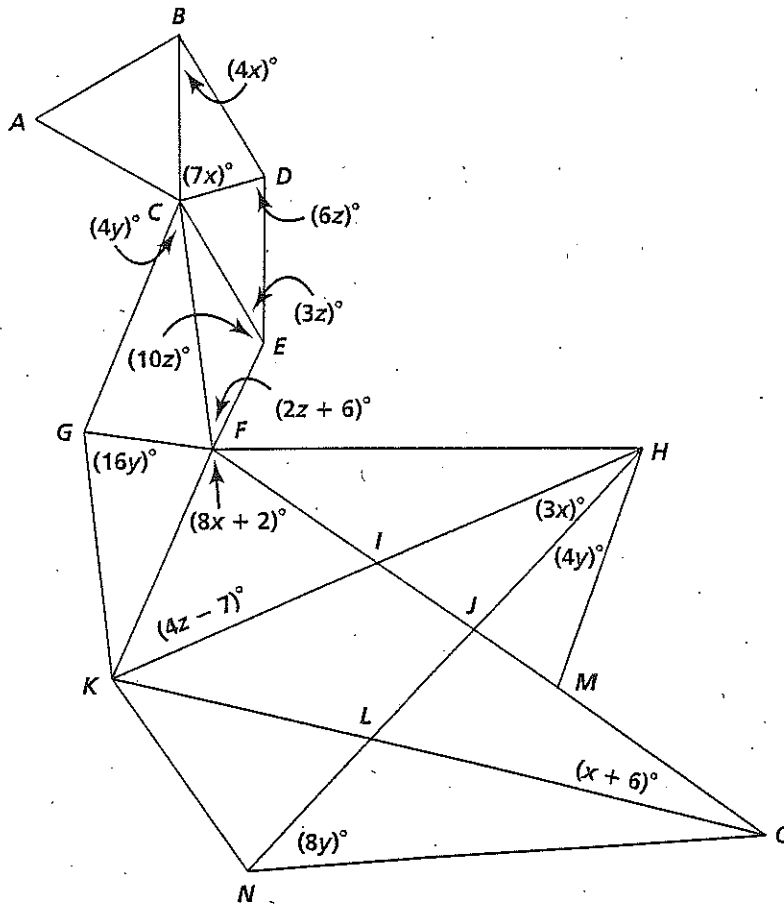


Enrichment 4-5

Triangular Swan

The swan below is composed of several triangles. Use the given information and the figure to find each angle measure.

Given: $\triangle ABC$ is equilateral; $\angle BCD \cong \angle BDC$; $\overline{DE} \cong \overline{CE} \cong \overline{EF}$;
 $\angle CGF \cong \angle CFG$; $\triangle GCF \cong \triangle GKF \cong \triangle JHM$; $\triangle KFH \cong \triangle KLH$;
 $\overline{KO} \cong \overline{FO}$; $\angle HKN \cong \angle HNK$; $\overline{JN} \cong \overline{JO}$



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|-------------------|-------------------|-------------------|-------------------|
| 1. $m\angle ABC$ | 2. $m\angle BCA$ | 3. $m\angle CAB$ | 4. $m\angle BCD$ |
| 5. $m\angle BDC$ | 6. $m\angle CBD$ | 7. $m\angle EDC$ | 8. $m\angle ECD$ |
| 9. $m\angle CED$ | 10. $m\angle ECF$ | 11. $m\angle EFC$ | 12. $m\angle CEF$ |
| 13. $m\angle CGF$ | 14. $m\angle CFG$ | 15. $m\angle GCF$ | 16. $m\angle KGF$ |
| 17. $m\angle KFG$ | 18. $m\angle GKF$ | 19. $m\angle FKH$ | 20. $m\angle FHK$ |
| 21. $m\angle KFH$ | 22. $m\angle KHL$ | 23. $m\angle HKL$ | 24. $m\angle KLH$ |
| 25. $m\angle HJM$ | 26. $m\angle HMJ$ | 27. $m\angle JHM$ | 28. $m\angle OFK$ |
| 29. $m\angle OKF$ | 30. $m\angle KOF$ | 31. $m\angle HKN$ | 32. $m\angle HNK$ |
| 33. $m\angle KHN$ | 34. $m\angle JNO$ | 35. $m\angle JON$ | 36. $m\angle NJO$ |