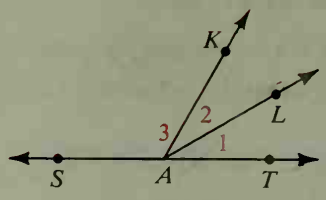
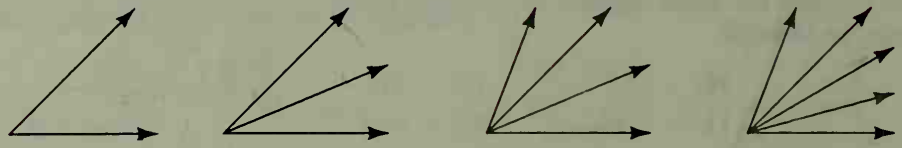
$\overrightarrow{AL}$ **bisects** $\angle KAT$. **Find the value of** x.

29. $m\angle 3 = 6x$, $m\angle KAT = 90 - x$
30. $m\angle 1 = 7x + 3$, $m\angle 2 = 6x + 7$
31. $m\angle 1 = 5x - 12$, $m\angle 2 = 3x + 6$
32. $m\angle 1 = x$, $m\angle 3 = 4x$
33. $m\angle 1 = 2x - 8$, $m\angle 3 = 116$
34. $m\angle 2 = x + 12$, $m\angle 3 = 6x - 20$



Exs. 29–34

C 35. **a.** Complete.



2 rays	3 rays	4 rays	5 rays
1 angle	3 angles	?6 angles	?10 angles

b. Study the pattern in the four cases shown, and predict the number of angles formed by six noncollinear rays that have the same endpoint.

c. Which of the expressions below gives the number of angles formed by n noncollinear rays that have the same endpoint?

$n - 1$ $\qquad 2n - 3$ $\qquad n^2 - 3$ $\qquad \dfrac{n(n-1)}{2}$

36. $\overrightarrow{OC}$ bisects $\angle AOB$, $\overrightarrow{OD}$ bisects $\angle AOC$, $\overrightarrow{OE}$ bisects $\angle AOD$, $\overrightarrow{OF}$ bisects $\angle AOE$, and $\overrightarrow{OG}$ bisects $\angle FOC$.
a. If $m\angle BOF = 120$, then $m\angle DOE =$?.
b. If $m\angle COG = 35$, then $m\angle EOG =$?.

1-5 *Postulates and Theorems Relating Points, Lines, and Planes*

Recall that we have accepted, without proof, the following four basic assumptions.

The Ruler Postulate
The Protractor Postulate
The Segment Addition Postulate
The Angle Addition Postulate

These postulates deal with segments, lengths, angles, and measures. The following five basic assumptions deal with the way points, lines, and planes are related.