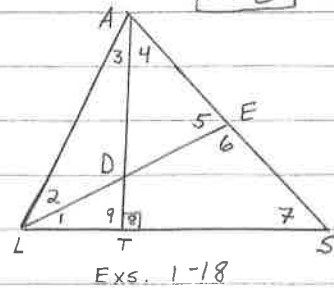


A #9 p. 21-22 WE #1-18, 29-33 odd

Key



1. Name the vertex and the sides of $\angle 5$.

Vertex: E Sides: \overrightarrow{EL} and \overrightarrow{EA}

2. Name all angles adjacent to $\angle ADE$.

$\angle ADL$ and $\angle EDT$

* There are multiple correct answers for #3-8.

3. $\angle 1$: $\angle ELS$ or $\angle DLS$ or $\angle DLT$ or ...

4. $\angle 3$: $\angle LAT$ 5. $\angle 5$: $\angle AEL$ 6. $\angle ALD$: $\angle 2$

7. $\angle AST$: $\angle 7$ 8. $\angle LES$: $\angle 6$ 9. $\angle 2$: acute

10. $\angle LAS$: acute 11. $\angle ATL$: right 12. $\angle S$: acute

13. $\angle LTS$: straight 14. $\angle EDT$: obtuse

Complete.

15. $m\angle 3 + m\angle 4 = m\angle LAE$ [Angle Addition Postulate]

16. $m\angle ALS - m\angle 2 = m\angle 1$ [" " "]

17. If $m\angle 1 = m\angle 2$, then \overrightarrow{LE} bisects $\angle ALS$. [*Definition of Angle Bisector]

18. $m\angle LDA + m\angle ADE = 180^\circ$ [Angle Addition Postulate or Linear Pair Postulate]

For #29-33 odd, \overrightarrow{AL} bisects $\angle KAT$.

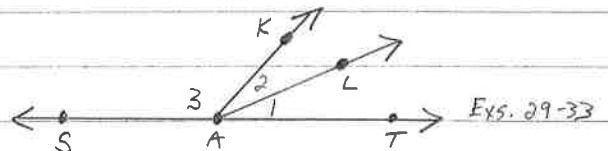
29. Given: $m\angle 3 = 6x$, $m\angle KAT = 90 - x$

$m\angle 3 + m\angle KAT = 180^\circ$ [\angle Add. Post.]

$$6x + 90 - x = 180$$

$$5x = 90$$

$$x = 18$$



31. Given: $m\angle 1 = 5x - 12$, $m\angle 2 = 3x + 6$

$m\angle 1 = m\angle 2$ [*Definition of \angle Bisector]

$$5x - 12 = 3x + 6$$

$$2x = 18$$

$$x = 9$$

33. Given: $m\angle 1 = 2x - 8$, $m\angle 3 = 116$

① $m\angle 1 = m\angle 2$ [*Def. of \angle Bisector]

② $m\angle 1 + m\angle 2 + m\angle 3 = 180$ [\angle Add. Post.]

$$2x - 8 + 2x - 8 + 116 = 180$$

$$4x = 80$$

$$x = 20$$