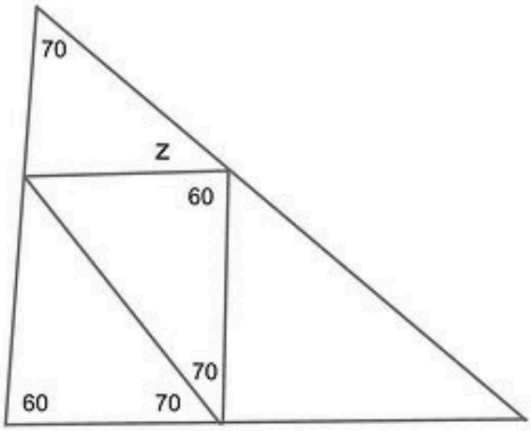
**Unit 2 Review** Name: _____ Block_____

**Solve each question for the unknown variables. Show the equation you set up and your work to earn full credit!**

1.

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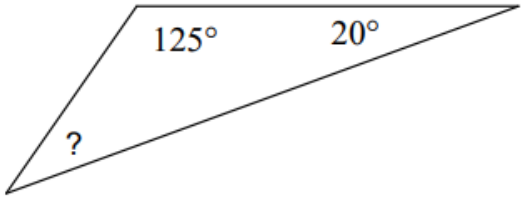


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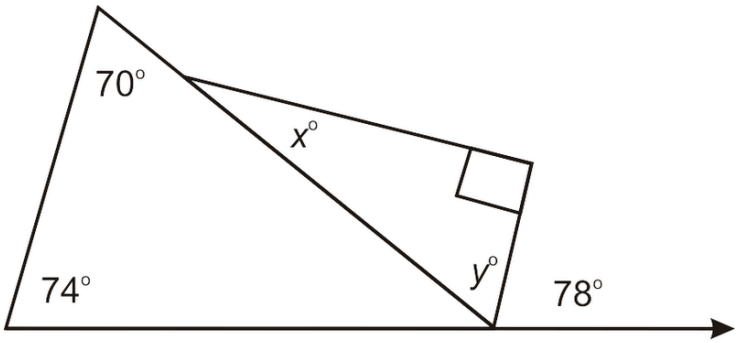
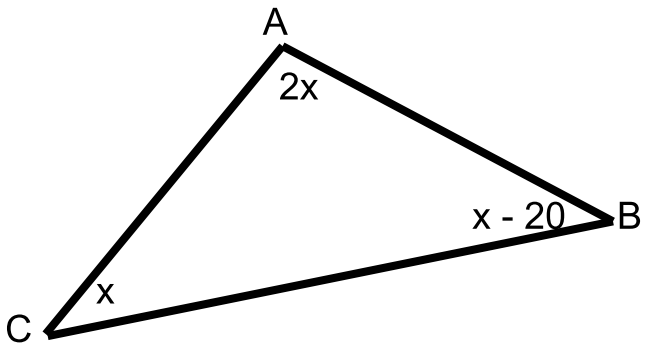



4. Find the value of x, m∠A, m∠B and m∠C

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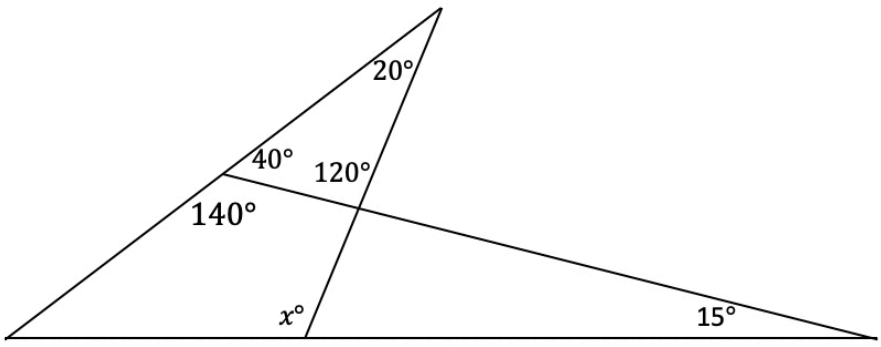


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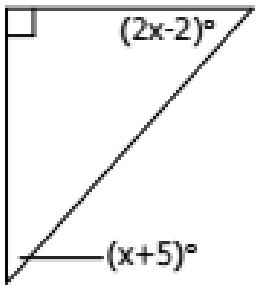

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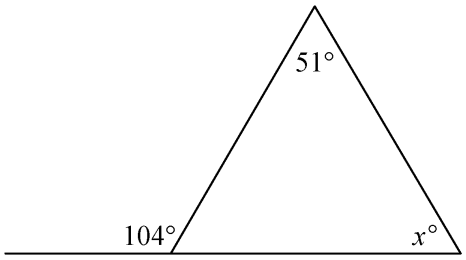


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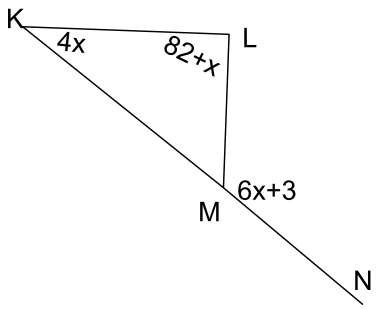


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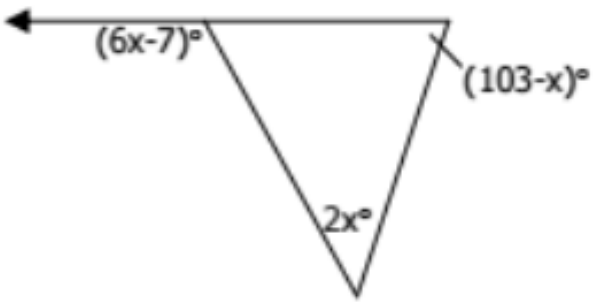


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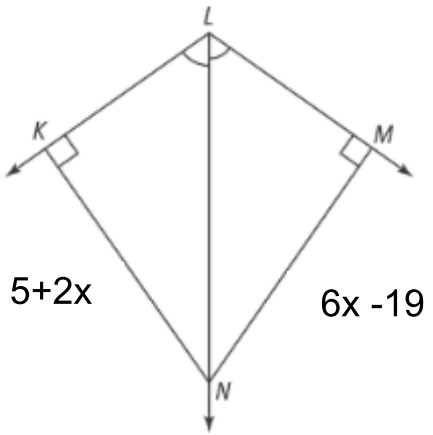
10. Solve for NM.

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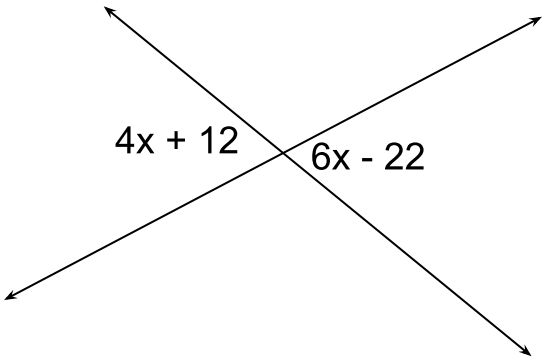


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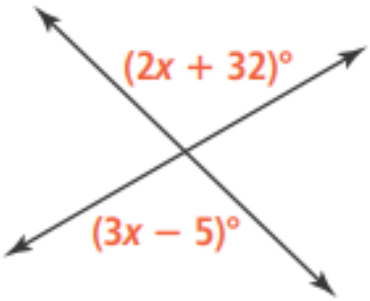

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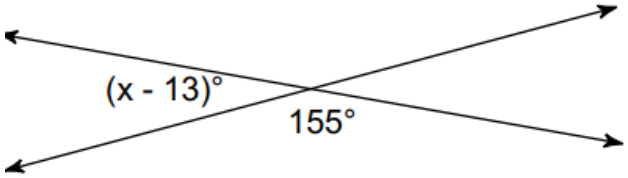
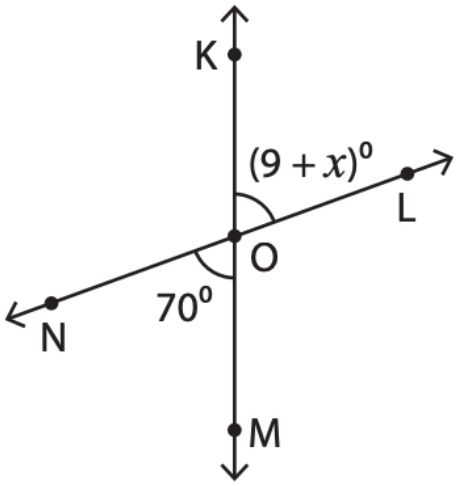



14. Solve for m∠MOL

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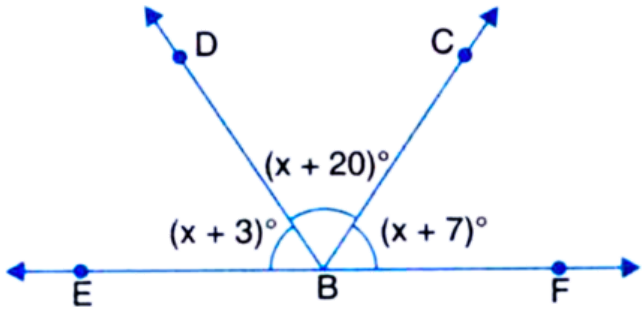
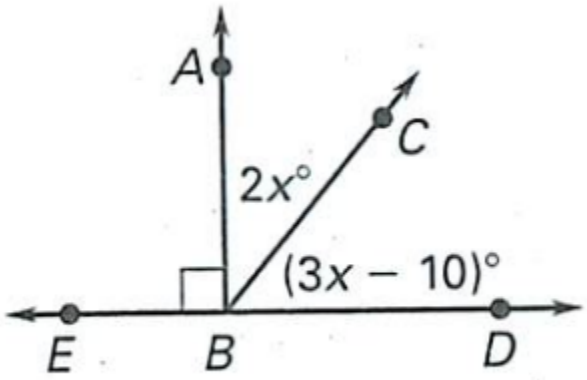
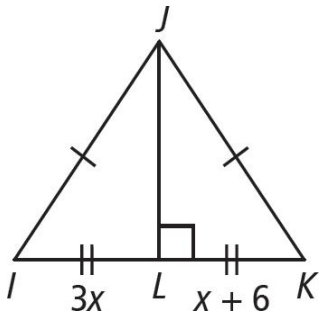



16.



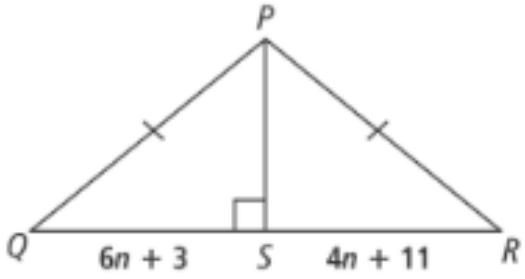

17. Which of the following statements must be true? <u>Select all that apply.</u>

- ☐ $\overline{JL}$ bisects $\overline{IK}$.
- ☐ $\Delta IJK$ is equilateral.
- ☐ $\overline{JL}$ is the perpendicular bisector of $\overline{IK}$.
- ☐ KL = 9

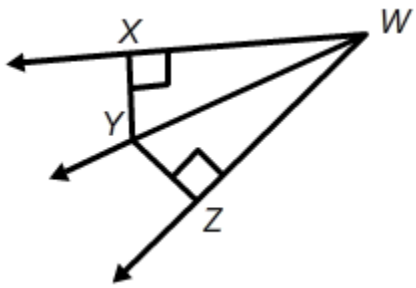


18. Which statements must be true? <u>Select all that apply.</u>

- ☐ n=7
- ☐ QS=21
- ☐ SR=27
- ☐ QR=54

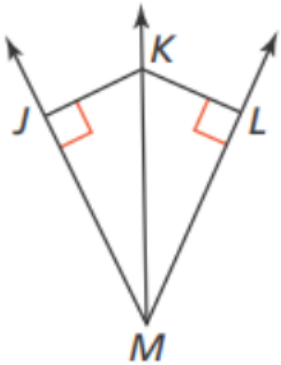



19. In the figure below, ray WY is an angle bisector of angle XWZ. If WX = 10, WZ = 10, and m<XWY = 32, what is m<ZWY?



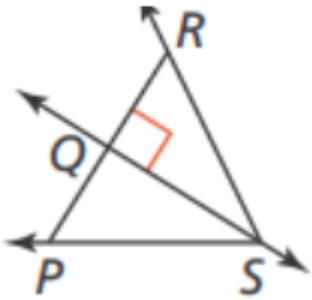

20. KL= _____

If $m\angle JML = 49$, $m\angle JMK = 24.5$, and $JK = 17$, then $KL =$ ■.



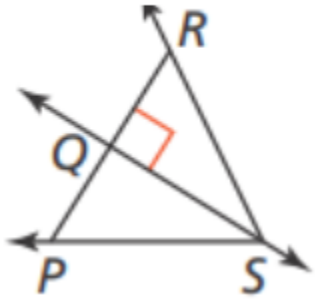

21. PR= _____

If $PS = 36$, $PQ = 3x + 5$, $QR = 6x - 10$, and $RS = 36$, then $PR =$ ■.



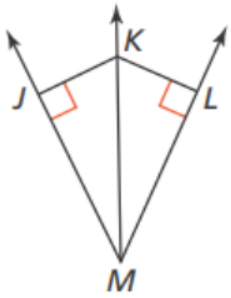
22. PS= _____

If $PS = 4x + 8$, $PQ = 29$, $RS = 5x - 3$, and $QR = 29$, then $PS =$ ■.



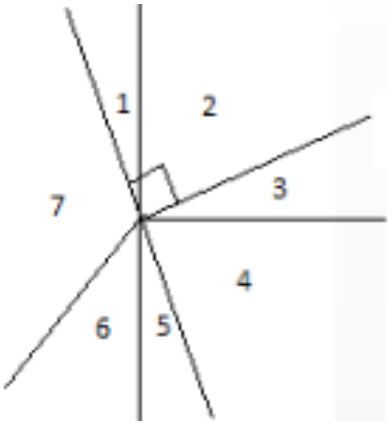

23. m<KML= _____

If $JM = 12$, $LM = 12$, and $m\angle JMK = 25$, then $m\angle KML =$ ■.




24. Which of the following are supplementary in the figure?

- ☐ ∠1 and ∠6
- ☐ ∠1 and ∠2
- ☐ ∠1 and ∠5
- ☐ ∠1, ∠6, and ∠7



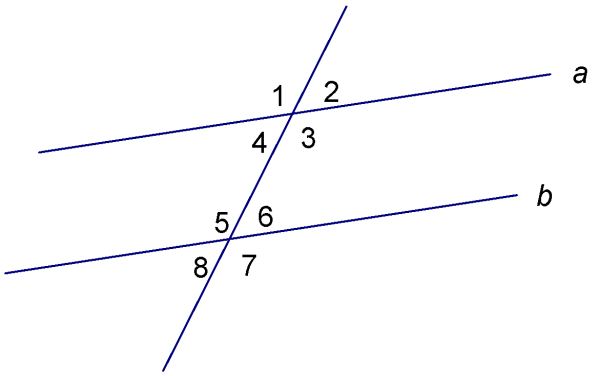

25. What angle pairs are congruent?_____

_____

26. What angle pairs are supplementary?_____

_____

27. For a-f Use the transversal to the right to help you answer.




a. ∠ 2 and ∠ _____ are a linear pair

b. ∠ 2 and ∠ _____ are a linear pair

c. ∠ 2 and ∠ _____ are vertical angles

d. ∠ 2 and ∠ _____ are same side exterior angles

e. ∠ 2 and ∠ _____ are alternate exterior angles

f. ∠ 2 and ∠ _____ are corresponding angles.

28. If $m\angle 1 = (2x + 4)°$ *and* $m\angle 7 = (3x - 7)°$, find $m\angle 7$.

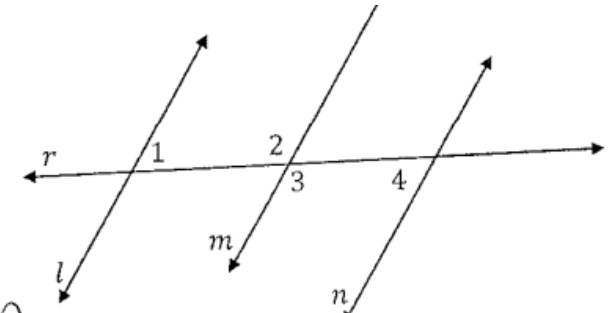
29. If $m\angle 1 = (6x + 13)°$ *and* $m\angle 8 = (4x - 23)°$, find $m\angle 6$.

30. If $m\angle 3 = (5x + 50)°$ *and* $m\angle 8 = (10x - 65)°$, find $m\angle 3$.

31.

**Write a 2 column proof:**

Given: $l \parallel m$, $m \parallel n$
Prove: < 1 is Supplementary to < 3.




| Statements | Reasons |
|---|---|
| 1. | 1. |
| 2. ∠1 is Suppl. to ∠2 | 2. |
| 3. ∠2 ≅ ∠3 | 3. |
| 4. ∠1 is Suppl. to ∠3 | 4. |