Name _____ Class _____ Date _____

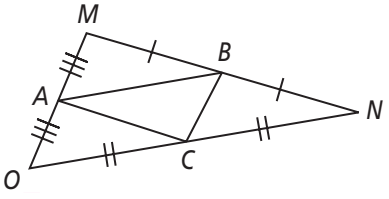
5-1 Practice

Form G

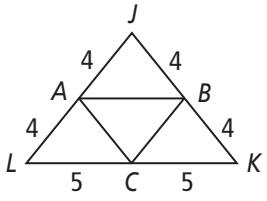
Midsegments of Triangles

Identify three pairs of triangle sides in each diagram.

1.



2.



Name the triangle sides that are parallel to the given side.

3. $\overline{AB}$

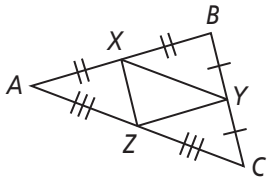
4. $\overline{AC}$

5. $\overline{CB}$

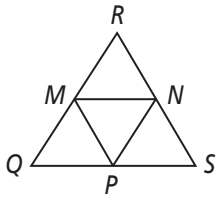
6. $\overline{XY}$

7. $\overline{XZ}$

8. $\overline{ZY}$



Points *M*, *N*, and *P* are the midpoints of the sides of $\triangle QRS$. $QR = 30$, $RS = 30$, and $SQ = 18$.



9. Find *MN*.

10. Find *MQ*.

11. Find *MP*.

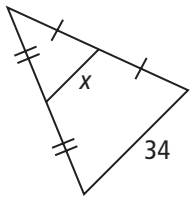
12. Find *PS*.

13. Find *PN*.

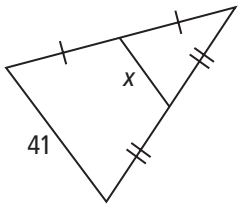
14. Find *RN*.

Algebra Find the value of *x*.

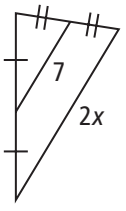
15.



16.



17.



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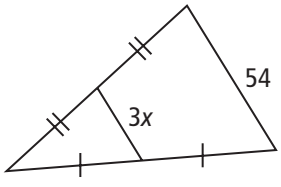

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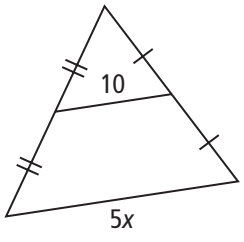

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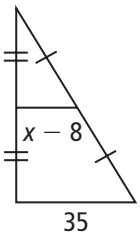
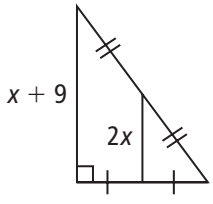


21.



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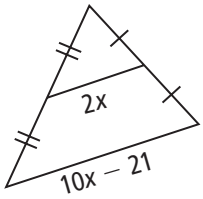
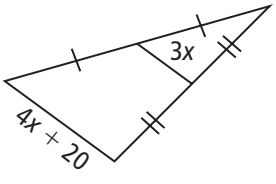


23.

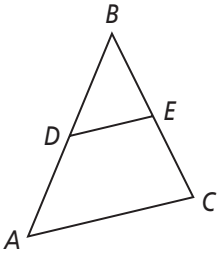


Name _____ Class _____ Date _____

5-1 Practice (continued) *Form G*

Midsegments of Triangles

***D* is the midpoint of $\overline{AB}$. *E* is the midpoint of $\overline{CB}$.**



24. If $m\angle A = 70$, find $m\angle BDE$.

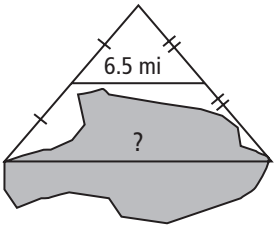
25. If $m\angle BED = 73$, find $m\angle C$.

26. If $DE = 23$, find AC.

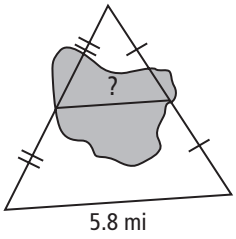
27. If $AC = 83$, find DE.

Find the distance across the lake in each diagram.

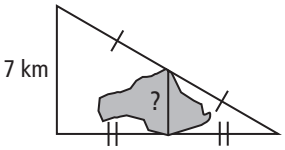
28.



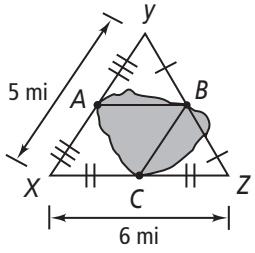
29.



30.



Use the diagram at the right for Exercises 31 and 32.



31. Which segment is shorter for kayaking across the lake, $\overline{AB}$ or $\overline{BC}$? Explain.

32. Which distance is shorter, kayaking from *A* to *B* to *C*, or walking from *A* to *X* to *C*? Explain.

33. Open-Ended Draw a triangle and all of its midsegments. Make a conjecture about what appears to be true about the four triangles that result. What postulates could be used to prove the conjecture?

34. Coordinate Geometry The coordinates of the vertices of a triangle are $K(2, 3)$, $L(-2, -1)$, and $M(5, 1)$.

a. Find the coordinates of *N*, the midpoint of $\overline{KM}$, and *P*, the midpoint of $\overline{LM}$.

b. Show that $\overline{NP} \parallel \overline{KL}$.

c. Show that $NP = \frac{1}{2}KL$.