Name: _____ Date: _____ Period: _____

6.4 Midsegment of a Triangle CYU

☑ *Use when you get it right all by yourself*

S *Use when you did it all by yourself, but made a silly mistake*

H *Use when you could do it alone with a little help from teacher or peer*

G *Use when you completed the problem in a group*

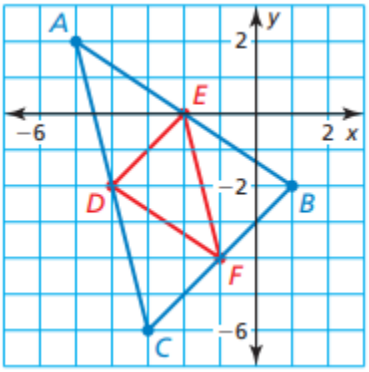
X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Midpoint Formula	1		
Slope Formula	2		
Distance Formula	2		14
Properties of a Midsegment of a Triangle	3 – 10	11, 12	13

Use the graph provided of ΔABC with midsegments $\overline{DE}, \overline{EF}, \& \overline{DF}$.

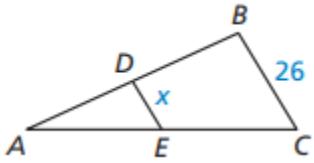
1. Find the coordinates of D, E, and F.



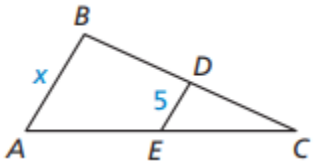
2. Show that $\overline{DE}$ is parallel to $\overline{CB}$ and that DE = $\frac{1}{2}$ CB.

$\overline{DE}$ *is a midsegment of ΔABC. Find the value of x.*

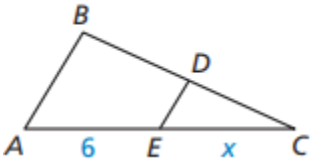
3.



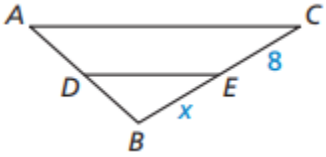
4.



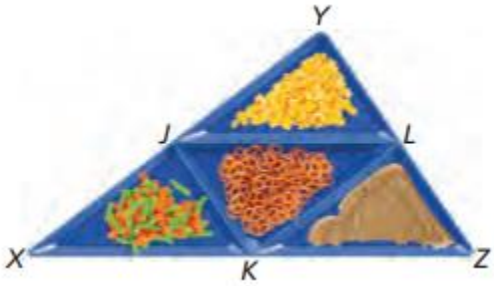
5.



6.



$\overline{XJ} \cong \overline{JY}, \overline{YL} \cong \overline{LZ}, \& \overline{XK} \cong \overline{KZ}$. *Complete the statement.*



7. $\overline{JK}$ || _____

8. $\overline{JL}$ || _____

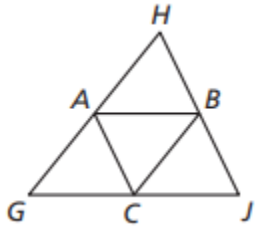
9. $\overline{JY}$ ≅ ___ ≅ ___

10. $\overline{KJ}$ ≅ ___ ≅ ___

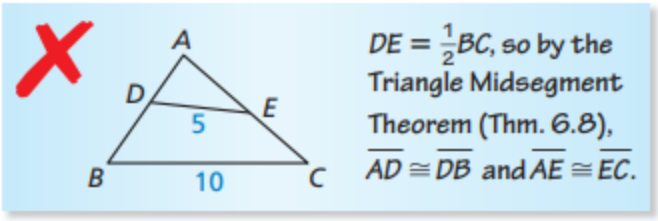
Use ΔGHJ, where A, B, & C are midpoints of the sides.

11. When AB = 3x + 8 & GJ = 2x + 24, what is AB?

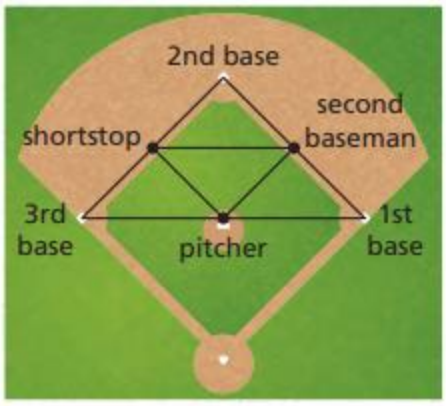
12. When GH = 7z – 1 & CB = 4z – 3, what is GA?



13. **ERROR ANALYSIS** Describe and correct the error.

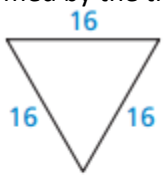


14. **MODELING WITH MATHEMATICS** The distance between consecutive bases on a baseball field is 90 feet. A second baseman stands halfway between first base and second base, a shortstop stands halfway between second base and third base, and a pitcher stands halfway between first base and third base. Find the distance between the shortstop and the pitcher.

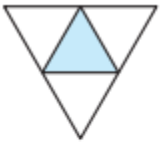


15. **ABSTRACT REASONING** To create the design shown, shade the triangle formed by the three midsegments of the triangle. Then repeat the process for each unshaded triangle.

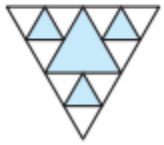
a) What is the perimeter of the shaded triangle in Stage 1?



Stage 0


Stage 1

b) What is the total perimeter of all the shaded triangles in Stage 2?


Stage 2


Stage 3

c) What is the total perimeter of all the shaded triangles in Stage 3?

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yours elf.