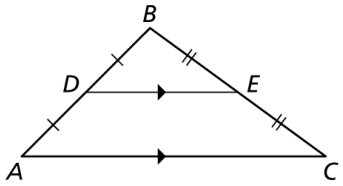
NOTES 6.4: TRIANGLE MIDSEGMENT THEOREM

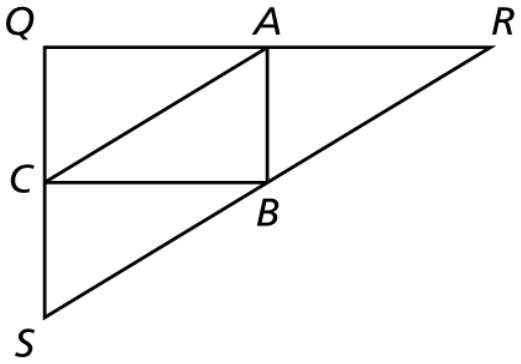
Objective:_____

_____

THEOREM	DIAGRAM
TRIANGLE MIDSEGMENT THEOREM The segment connecting the midpoints of two sides of a triangle is parallel to the third side and is half as long as that side.	 **$\overline{DE}$ is a midsegment of ΔABC,** **$DE \parallel AC$, and $DE =$ _____.**

EXAMPLES:

In Examples 1–6, use ΔQRS where A, B, and C are the midpoints of the sides.



1. **When $AB = 16$, what is QS?**
2. **When $SR = 68$, what is CA?**
3. **When $SR = 46$, what is BR?**
4. **When $CA = 3x - 1$ and $SR = 5x + 4$, what is CA?**
5. **When $QS = 6x$ and $CS = 5x - 8$, what is AB?**
6. **When $m\angle BCA = 48°$, what is the $m\angle CAQ$?**