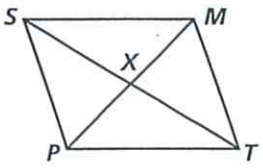
Use algebra or theorems to justify

Name _____ Class _____ Date _____

Practice 6-3

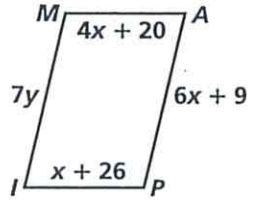
Proving That a Quadrilateral Is a Parallelogram

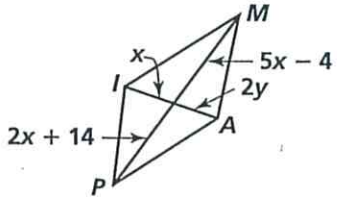
State whether the information given about quadrilateral *SMTP* is sufficient to prove that it is a parallelogram. Explain! Use theorem(s)

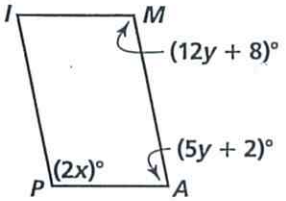


1. $\angle SPT \cong \angle SMT$
2. $\angle SPX \cong \angle TMX$, $\angle TPX \cong \angle SMX$
3. $\overline{SM} \cong \overline{PT}$, $\overline{SP} \cong \overline{MT}$
4. $\overline{SX} \cong \overline{XT}$, $\overline{SM} \cong \overline{PT}$
5. $\overline{PX} \cong \overline{MX}$, $\overline{SX} \cong \overline{TX}$
6. $\overline{SP} \cong \overline{MT}$, $\overline{SP} \parallel \overline{MT}$

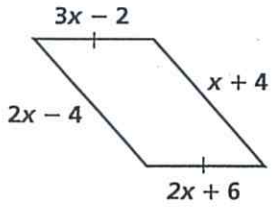
Algebra **Find the values of x and y for which the figure must be a parallelogram.**

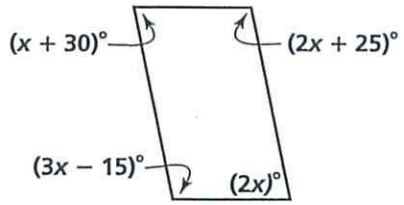
7. 

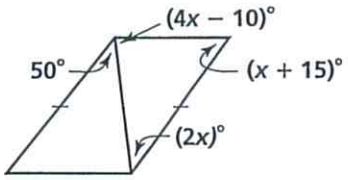
8. 

9. 

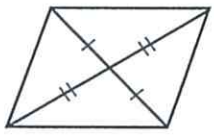
Algebra **Find the value of x. Then tell whether the figure must be a parallelogram. Explain your answer.**

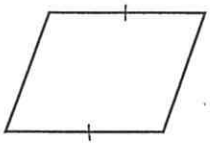
10. 

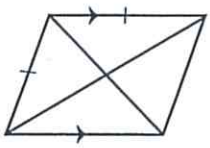
11. 

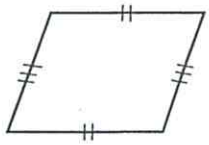
12. 

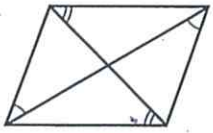
Decide whether the quadrilateral is a parallelogram. Explain your answer.

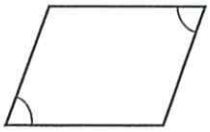
13. 

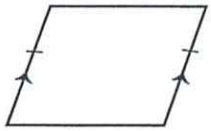
14. 

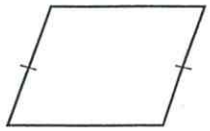
15. 

16. 

17. 

18. 

19. 

20. 

(over for notes)