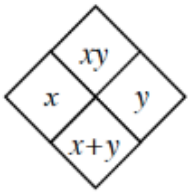
Name _____

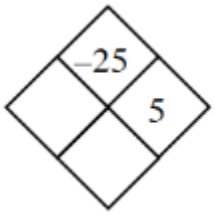
Period _____ Date _____

Homework 3.4

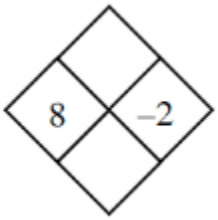
1. Complete each of the diamond problems below.



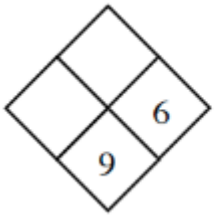
a.



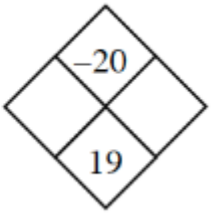
b.



c.

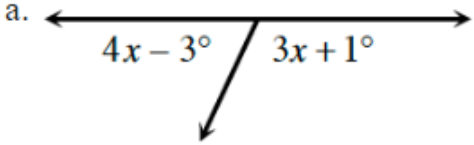


d.

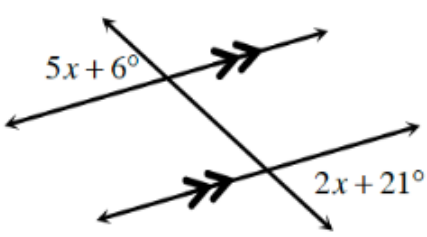


2. For each diagram, solve for the variable and state the relationship(s) you used.

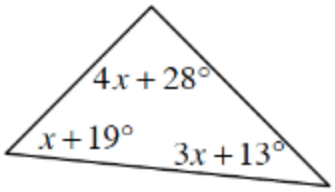
a.



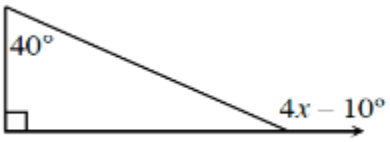
b.



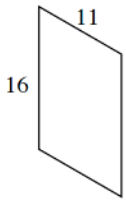
c.



d.



3. Rakisha is puzzled. She is working with the parallelogram drawn below and wants to make it smaller instead of bigger



a. What should she do if she wants the sides of her new figure to be *half as long* as the original sides? What scale factor should she use? What are the dimensions of her new figure?

b. While drawing some other shapes, Rakisha ended up with a shape congruent to the original parallelogram. What is the ratio between the pairs of corresponding sides?

c. Rakisha is convinced that every parallelogram with adjacent sides that measure 11 and 16 units will be congruent to the parallelogram above. Is she correct? Justify your answer using a proof or a counterexample.