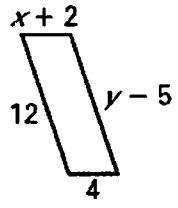
Parallelogram Practice Worksheet

Name Key Class Period

Find the missing variable in each parallelogram.

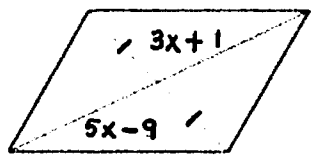
1. 

$X+2=4$

$X=2$

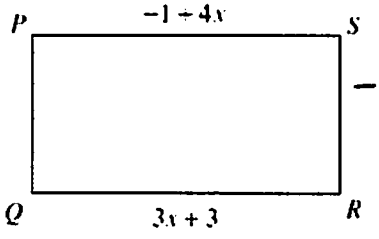
$y-5=12$

$y=17$

2. 

$3X+1=5X-9$

$X=5$

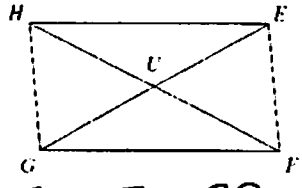
3. 

$-1+4X=3X+3$

$X=4$

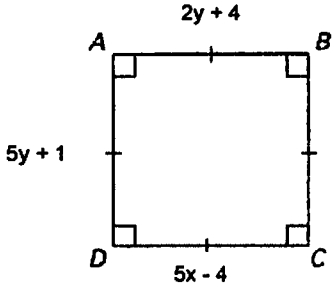
4. $UH = 19$

$FH = 5x - 7$



$5X-17=38$

$X=9$

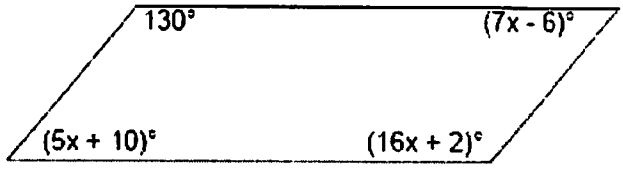
5. 

$3X=5X-4$

$X=2$

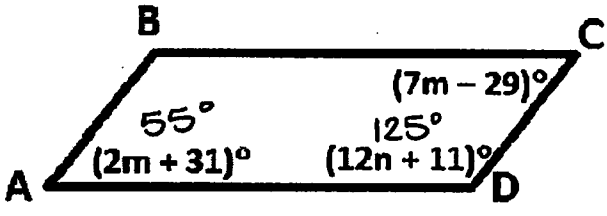
$2y+4=5y+1$

$y=1$

6. 

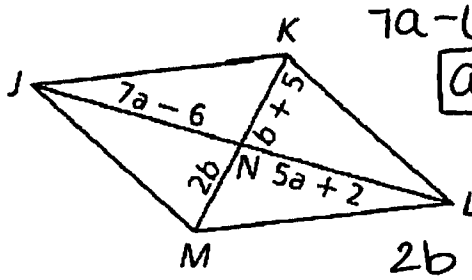
$16X+2=130$

$X=8$

7. 

$2m+31=7m-29$

$m=12$ $n=9.5$

8. 

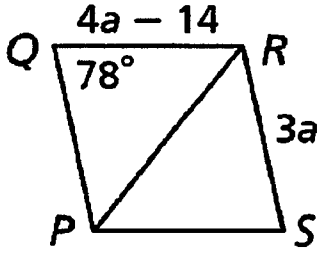
$7a-6=5a+2$

$a=4$

$2b=b+5$

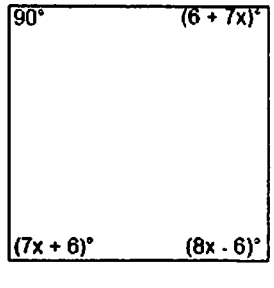
$b=5$

9. RQPS is a Rhombus



$4a-14=3a$

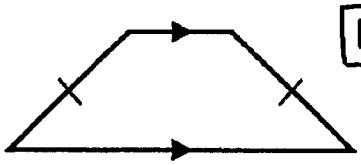
$a=14$

10. 

$8X-6=90$

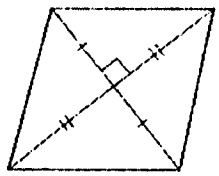
$X=12$

Decide if the figure is a parallelogram (answer yes or no). If yes, can you identify the type of parallelogram? If it is not, explain why not.

11. 

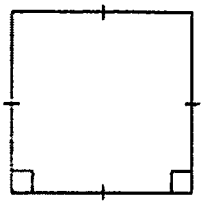
NO

only 1 pair of parallel sides

12. 

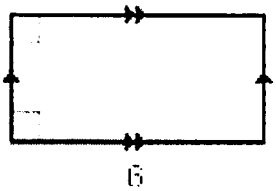
yes

Rhombus

13. 

yes

Square

14. 

yes

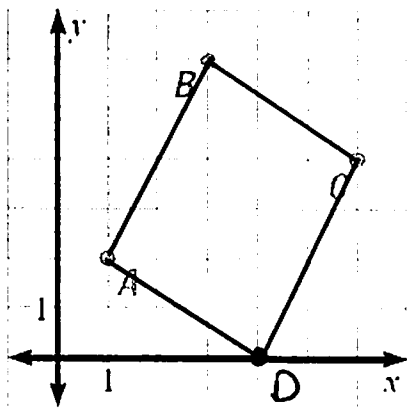
Rectangle

---

15. Suppose points A (1, 2), B (3, 6), and C (6, 4) are three vertices of a parallelogram.

a. Give the coordinates of a point that could be the fourth vertex. Sketch the parallelogram in a coordinate plane.

(4, 0)



b. Explain how to check to make sure the figure you drew in part a is a parallelogram.

Show that opposite sides have the same slope.

c. Now show the work to prove the figure is a parallelogram.

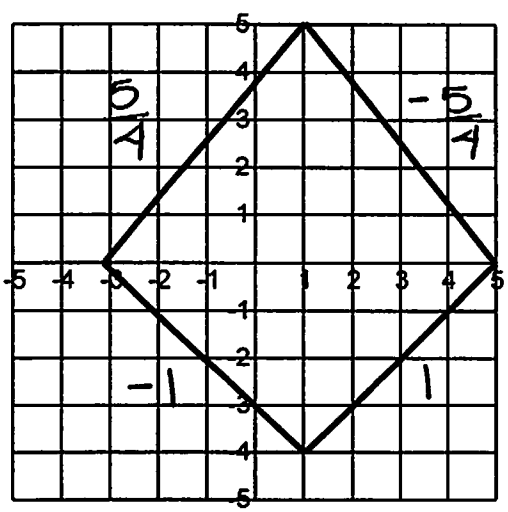
slope of AB = 2 slope of AD = $-\frac{2}{3}$

slope of DC = 2 slope of BC = $-\frac{2}{3}$

---

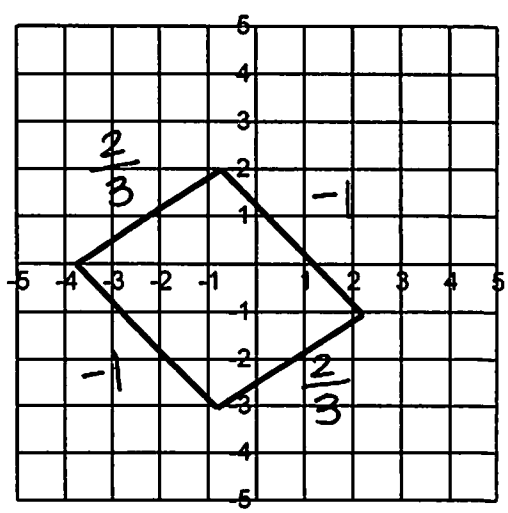
16. Find the slope of each side to determine if the following quadrilateral is a parallelogram. If it is not, then identify the quadrilateral.

a.



Kite

b.



Parallelogram