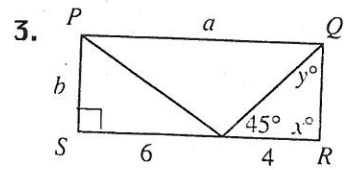
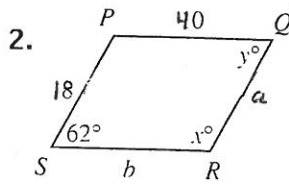
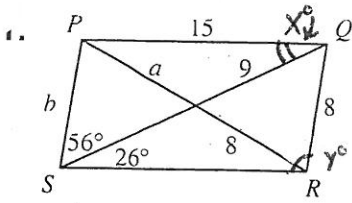
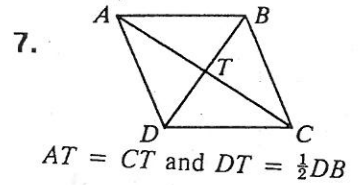
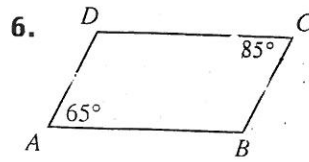
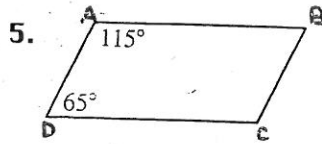
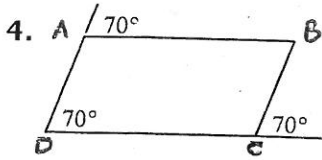


#1-3, $PQRS$ is a parallelogram. Find the values for a , b , x and y .



#4-7, Decide whether or not $ABCD$ is a parallelogram. State your reason.

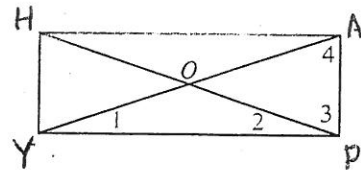


#8-10, Quadrilateral $HAPY$ is a rectangle.

8. If $m\angle 1 = 18^\circ$, find the measures of $\angle 2$, $\angle 3$, & $\angle 4$.

9. $HP = 27$, find OA .

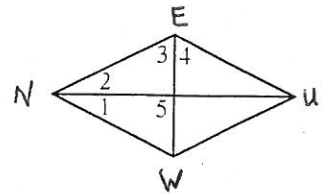
10. If $YO = 4y + 7$ and $HP = 30$, find y .



#11-12, Quadrilateral $NEUU$ is a rhombus.

11. If $m\angle 1 = 3x + 8$ and $m\angle 2 = 11x - 24$, solve for x .

12. If $m\angle 1 = 3x + 1$ and $m\angle 3 = 7x - 14$, solve for x .



#13-15, $YEAR$ is an isosceles trapezoid with bases \overline{YE} and \overline{AR} .

13. If $YE = 23.9$ and $CD = 16.4$, Find AR .

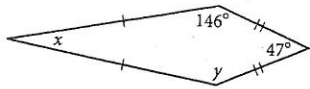
14. If $m\angle RCD = 52^\circ$, find $m\angle EDC$.

15. If $m\angle CDE = 3x$, find $m\angle DEY$ in terms of x .

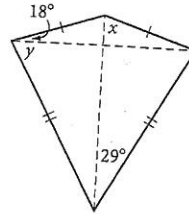


#16-17, solve for x and y.

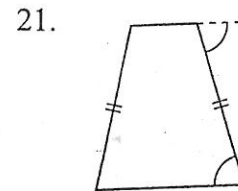
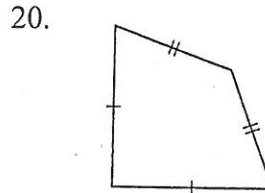
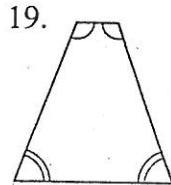
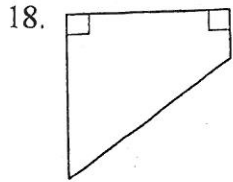
16. $x = ?$
 $y = ?$



17. $x = ?$
 $y = ?$



#18-21, each figure has at most one set of parallel sides. Decided whether or not is it a trapezoid. If it is, is it an isosceles trapezoid?

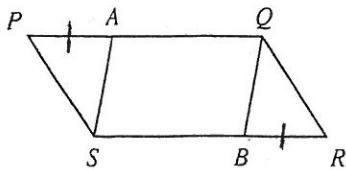


#22- 27, Complete each statement with an *always*, *sometimes* or *never* true.

22. The bases of a trapezoid are parallel.
23. A square is a rhombus.
24. The diagonals of a parallelogram are equal.
25. An isosceles trapezoid is a parallelogram
26. The diagonals of a rhombus are perpendicular.
27. A quadrilateral with (2) pair of opposite congruent sides is a rectangle.

#28-29, Write a 2 column proof (6 steps).

28. Given: $\square PQRS$; $PA = RB$
Prove: $AS = BQ$



29. Given: $\overline{AD} \cong \overline{BC}$; $\overline{AD} \parallel \overline{BC}$
Prove: $\triangle ADF \cong \triangle CBF$

