

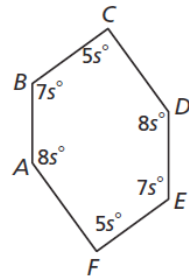
Vocabulary to define:

- Trapezoid base
- Concave
- Convex
- Diagonal
- Isosceles trapezoid
- Kite
- Midsegment of a trapezoid
- Parallelogram
- Rectangle
- Regular polygon
- Rhombus
- Side of a polygon
- Square
- Trapezoid
- Vertex of a polygon

1. Create a sketch of a regular convex polygon.
2. Create a sketch of an irregular concave polygon.
3. Find the sum of the interior angles for a *dodecagon*.
4. Find the measure of each interior angle of a regular 20-gon.
5. Find the measure of each exterior angle of a regular heptagon

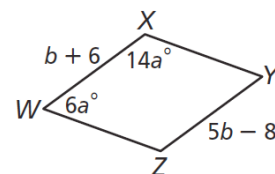
6. Find each measure for the polygon ABCDEF at right:

- a. The sum of the interior angles
- b. The measure of the smallest angle
- c. The measure of the exterior angle off of vertex A

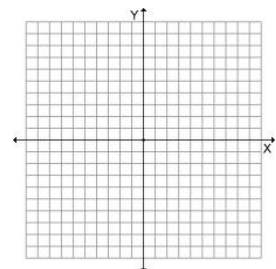


7. WXYZ is a parallelogram. Find each measure.

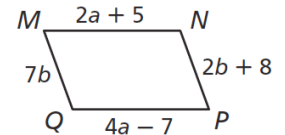
- a. WX
- b. YZ
- c. $m\angle W$
- d. $m\angle X$
- e. $m\angle Y$
- f. $m\angle Z$



8. Three vertices of parallelogram RSTV are $R(-8,1)$, $S(2,3)$, and $V(-4,-7)$. Find the coordinates of vertex T. Make a sketch to check your work.

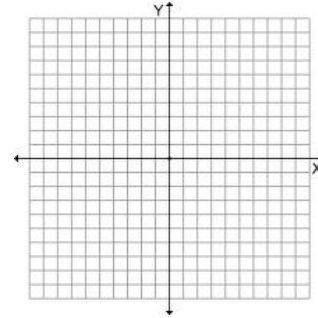


9. Show that MNPQ is a parallelogram given that $a=6$ and $b=1.6$



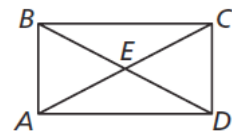
10. Show that the quadrilateral with vertices $B(-4, 3)$, $D(6, 5)$, $F(7, -1)$, and $H(-3, -3)$ is a parallelogram.

- Show with slope calculations
- Show with distance calculations
- Complete a quick sketch.



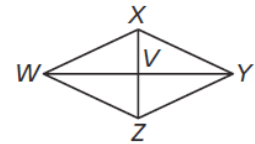
11. In rectangle ABCD, $CD = 18$, and $CE = 19.8$.

- Find length AB
- Find length BE



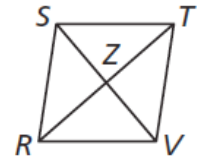
12. In rhombus WXYZ, $WX = 7a+1$, $WZ=9a-6$, and $VZ=3a$.

- Find length XY
- Find length XZ



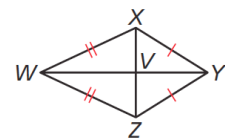
13. In rhombus RSTV, $m\angle TZV = (8n+18)^\circ$, and $m\angle SRV = (9n+1)^\circ$.

- Find $m\angle TRS$
- Find $m\angle TVR$

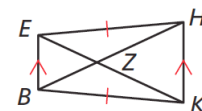


14. In kite WXYZ, $m\angle VXY = 58^\circ$, and $m\angle ZWX = 50^\circ$.

- Find $m\angle ZWV$
- Find $m\angle WZY$



15. Find the measure of BZ of $ZH=70$ and $EK=121.6$



16. Find the measure of MN

