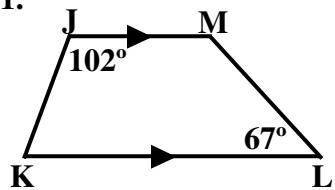


Geometry
Assignment 8.4

Name: _____

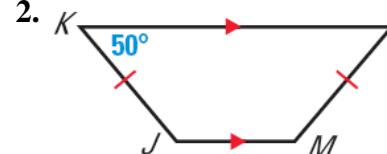
Find $m\angle K$ and $m\angle M$.

1.

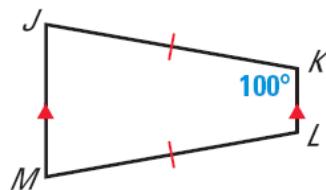


Find $m\angle J$, $m\angle L$, $m\angle M$.

2.

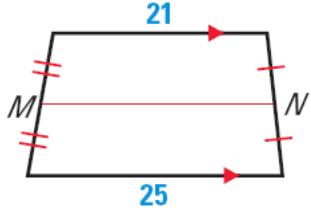


3.

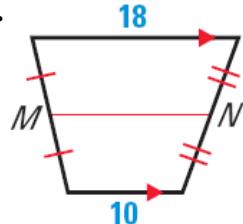


Find the length of the midsegment of the trapezoid.

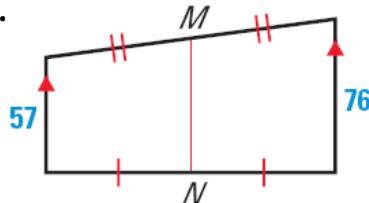
4.



5.

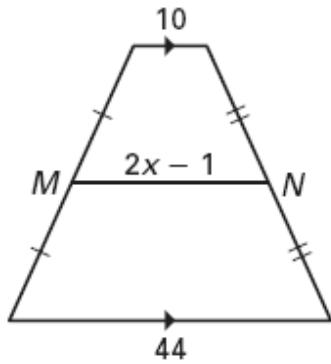


6.

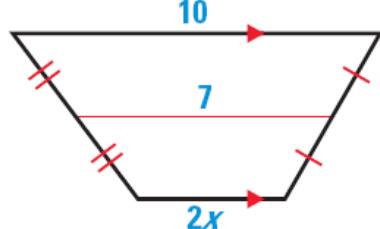


Determine the value of x for the isosceles trapezoids.

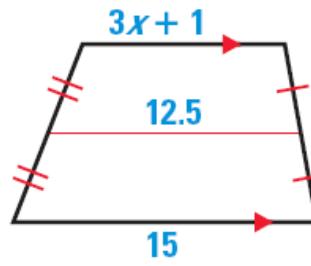
7.



8.

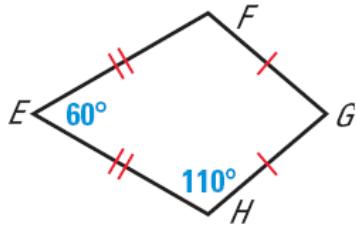


9.

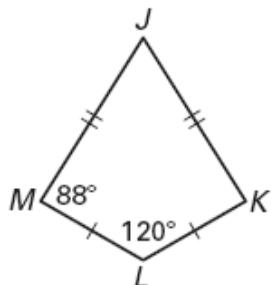


Find the missing angle measures for the kites.

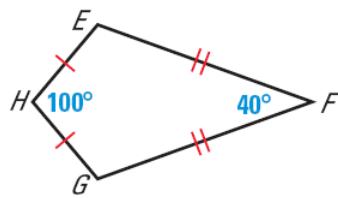
10.



11.

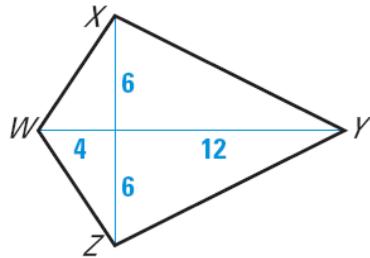


12.

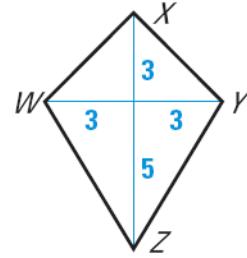


Find the missing side lengths for the kites.

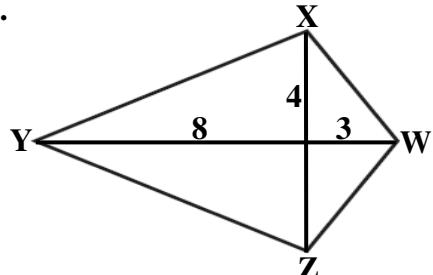
13.



14.



15.



16. Find the indicated measures of rhombus PQRS.

a) $m\angle QPR =$

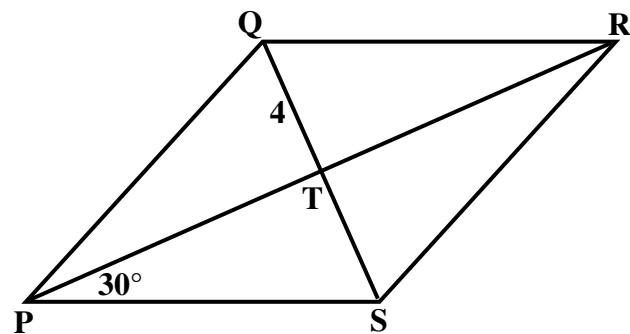
d) $TP =$

b) $m\angle QTP =$

e) $QP =$

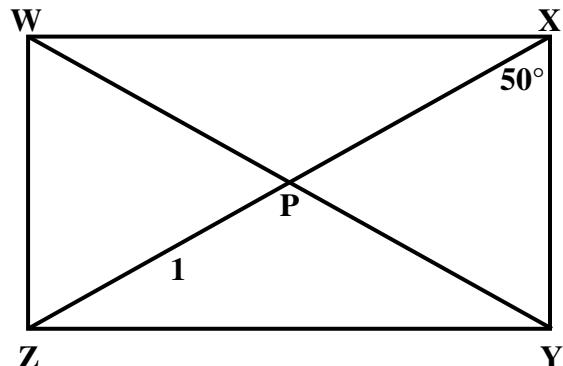
c) $m\angle TQP =$

f) $QR =$



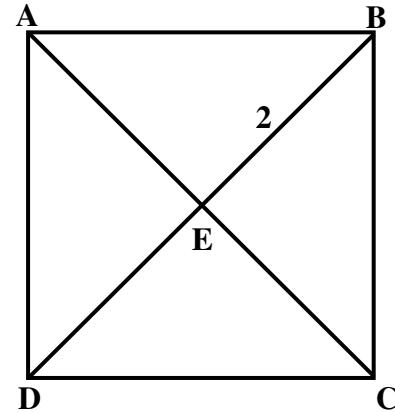
17. Find the indicated measures of rectangle WXYZ.

- | | |
|-----------|--------------------|
| a) $PX =$ | d) $m\angle WXP =$ |
| b) $WP =$ | e) $m\angle XWP =$ |
| c) $WY =$ | f) $m\angle ZYW =$ |

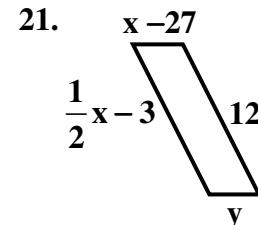
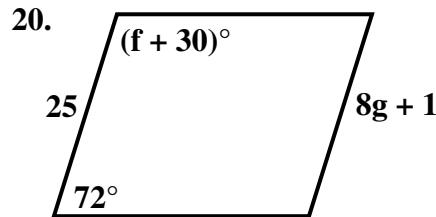
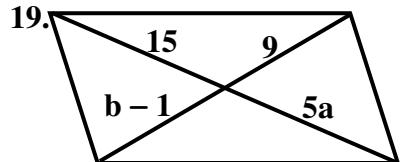


18. Find the indicated measures of square ABCD.

- | | |
|--------------------|--------------------|
| a) $m\angle CEB =$ | d) $m\angle ECB =$ |
| b) $EC =$ | e) $AC =$ |
| c) $m\angle EBC =$ | f) $BC =$ |

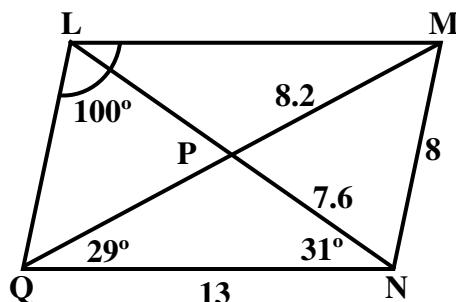


Find the value of the variables in the parallelogram.



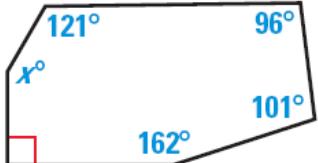
22. Find the indicated measure in $\square LMNQ$.

- | | |
|--------------------|-----------|
| a) $LP =$ | d) $LM =$ |
| b) $m\angle LMN =$ | e) $QM =$ |
| c) $m\angle LQM =$ | f) $LN =$ |

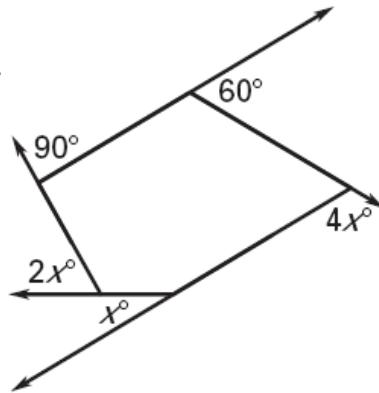


Find the value of x.

23.



24.



25. Determine the sum of the interior angles of a regular octagon.

26. The measure of each interior angle of a regular polygon is 108° . How many sides does the polygon have? What is the name of the polygon?

27. Find the measure of each exterior angle of a regular dodecagon.

28. The measure of an exterior angle of a regular n-gon is 120° . How many sides does the polygon have? What is the name of the polygon?

Answer Key:

- | | | | | |
|--|---|---------------------|--|---|
| 1) $m\angle K = 78^\circ$, $m\angle M = 113^\circ$ | 2) $m\angle J = 130^\circ$, $m\angle L = 50^\circ$, $m\angle M = 130^\circ$ | | | |
| 3) $m\angle J = 80^\circ$, $m\angle M = 80^\circ$, $m\angle L = 100^\circ$ | 4) $MN = 23$ | 5) $MN = 14$ | 6) $MN = 66.5$ | |
| 7) $x = 14$ | 8) $x = 2$ | 9) $x = 3$ | 10) $m\angle G = 80^\circ$, $m\angle F = 110^\circ$ | 11) $m\angle K = 88^\circ$, $m\angle J = 64^\circ$ |
| 12) $m\angle E = 110^\circ$, $m\angle G = 110^\circ$ | 13) $WX = WZ = 2\sqrt{13}$, $XY = YZ = 6\sqrt{5}$ | | | |
| 14) $WX = XY = 3\sqrt{2}$, $WZ = YZ = \sqrt{34}$ | 15) $XW = WZ = 5$, $XY = YZ = 4\sqrt{5}$ | | | |
| 16) a) 30° b) 90° c) 60° d) $4\sqrt{3}$ e) 8 f) 8 | 17) a) 1 b) 1 c) 2 d) 40° e) 40° f) 40° | | | |
| 18) a) 90° b) 2 c) 45° d) 45° e) 4 f) $2\sqrt{2}$ | 19) a = 3, b = 10 20) g = 3, f = 78 21) x = 30, y = 3 | | | |
| 22) a) 7.6 b) 80° c) 51° d) 13 e) 16.4 f) 15.2 | 23) x = 150 24) x = 30 25) 1,080° | | | |
| 26) n = 5, Pentagon | 27) 30° | 28) n = 3, Triangle | | |