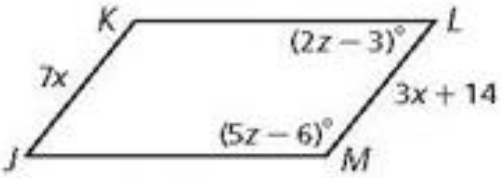
P. 407: 9–12, 21–24, 41–43, 46, 47, 51 Answer Key

JKLM is a parallelogram. Find each measure.



9. JK 24.5

10. LM 24.5

11. $m\angle L$ 51°

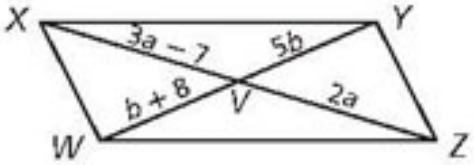
12. $m\angle M$ 129°

$7x = 3x + 14$
$4x = 14$
$x = 14/4$
$x = 3.5$
$\overline{JK} = 7(3.5)$
$\overline{JK} = 24.5$

$2z - 3 + 5z - 6 = 180$
$7z - 9 = 180$
$7z = 189$
$z = 27$

$m\angle L = 2(27) - 3$
$m\angle L = 51°$
$m\angle M = 180 - 51$
$129°$

WXYZ is a parallelogram. Find each measure.



21. WV 10

22. YW 20

23. XZ 28

24. ZV 14

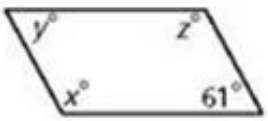
$3a - 7 = 2a$
$a = 7$

$b + 8 = 5b$
$\frac{8}{4} = \frac{4b}{4}$
$2 = b$

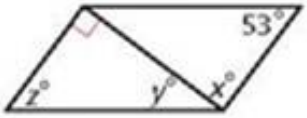
$\overline{WV} = 2 + 8 = 10$
$\overline{XZ} = 2(7) + 2(7)$

Find the values of x, y, and z in each parallelogram.

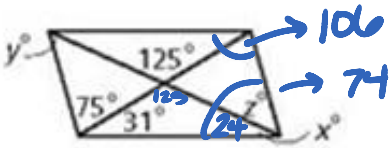
41.



42.



43.



$y = 61°$
$x = 119°$
$z = 119°$

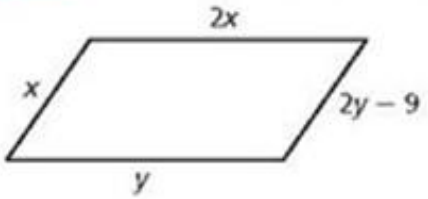
$x = 90°$
$z = 53°$
$y = 37°$

$180 - 53 = 127$
$127 - 90 = 37$

$x = 24°$
$y = 50°$
$z = 50°$

Algebra Find the values of x and y in each parallelogram.

46.



$\boxed{2x} = y$

$x = 2y - 9$

$x = 2(2x) - 9$

$x = 4x - 9$

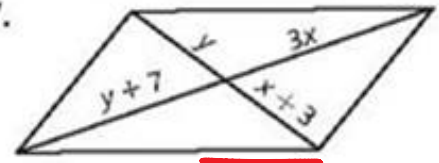
$-3x = -9$

$\boxed{x = 3}$

$2(3) = y$

$\boxed{6 = y}$

47.



$y = \boxed{x+3}$

$y + 7 = 3x$

$x + 3 + 7 = 3x$

$x + 10 = 3x$

$10 = 2x$

$\boxed{x = 5}$

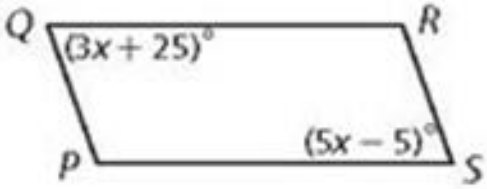
$y = 5 + 3$

$\boxed{y = 8}$

51. What is the value of x in ▱$PQRS$?

(A) 15 (C) 30

(B) 20 (D) 70



$3x + 25 = 5x - 5$

$30 = 2x$

$x = 15$