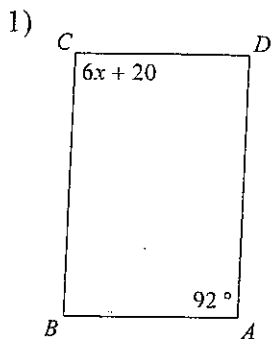
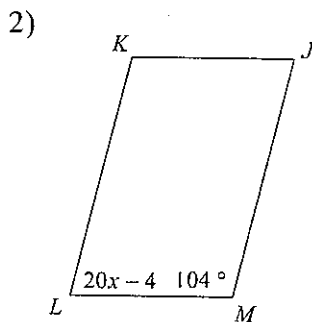


Parallelogram Practice

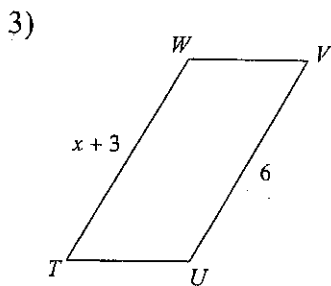
Solve for x. Each figure is a parallelogram.



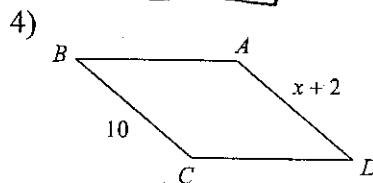
$$\begin{array}{r} 6x+20 = 92 \\ -20 \quad -20 \\ \hline 6x = 72 \\ \frac{6}{6} \quad \frac{6}{6} \\ \hline x = 12 \end{array}$$



$$\begin{array}{r} 20x - 4 + 104 = 180 \\ 20x + 100 = 180 \\ -100 \quad -100 \\ \hline 20x = 80 \\ \frac{20}{20} \quad \frac{80}{20} \\ \hline x = 4 \end{array}$$

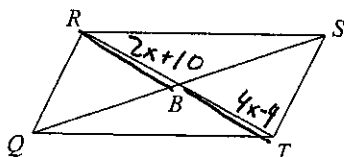


$$\begin{array}{r} x+3 = 6 \\ -3 \quad -3 \\ \hline x = 3 \end{array}$$



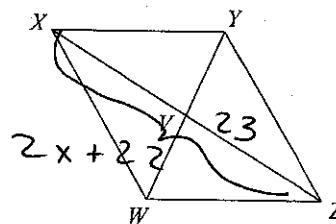
$$\begin{array}{r} 10 = x+2 \\ -2 \quad -2 \\ \hline x = 8 \end{array}$$

5) $RB = 2x + 10$
 $BT = 4x - 4$



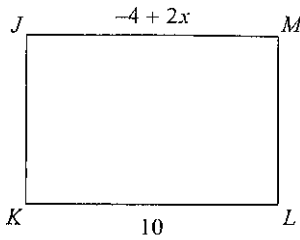
$$\begin{array}{r} 2x+10 = 4x-4 \\ -4x \quad -4x \\ \hline -2x+10 = -4 \\ -10 \quad -10 \\ \hline -2x = -14 \\ \frac{-2}{-2} \quad \frac{-14}{-2} \\ \hline x = 7 \end{array}$$

6) $VZ = 23$
 $XZ = 2x + 22$



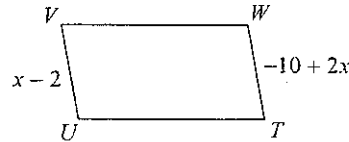
$$\begin{array}{r} 2(23) = 2x+22 \\ 56 = 2x+22 \\ -22 \quad -22 \\ \hline 34 = 2x \\ \frac{34}{2} = \frac{2x}{2} \quad x = 17 \end{array}$$

7)



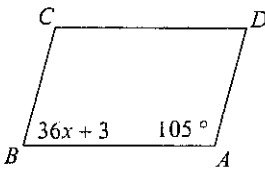
$$\begin{array}{r} -4 + 2x = 10 \\ +4 \quad +4 \\ \hline 2x = 14 \\ \frac{2x}{2} = \frac{14}{2} \\ \boxed{x = 7} \end{array}$$

8)



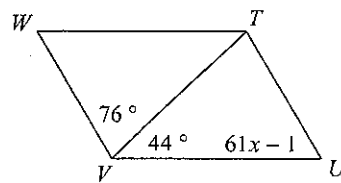
$$\begin{array}{r} x - 2 = -10 + 2x \\ +2 \quad +2 \\ \hline x = -8 + 2x \\ -2x \quad -2x \\ \hline -x = -8 \\ \boxed{x = 8} \end{array}$$

9)



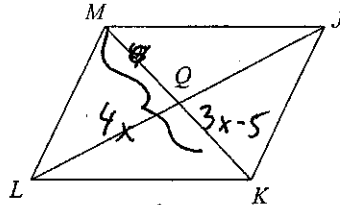
$$\begin{array}{r} 36x + 3 + 105 = 180 \\ 36x + 108 = 180 \\ -108 \quad -108 \\ \hline 36x = 72 \\ \frac{36x}{36} = \frac{72}{36} \\ \boxed{x = 2} \end{array}$$

10)



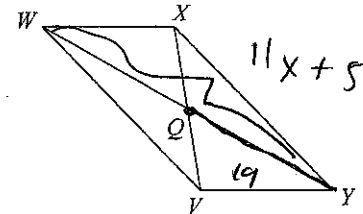
$$\begin{array}{r} 76 + 44 + 61x - 1 = 180 \\ 119 + 61x = 180 \\ -119 \quad -119 \\ \hline 61x = 61 \\ \frac{61x}{61} = \frac{61}{61} \\ \boxed{x = 1} \end{array}$$

11) $KQ = 3x - 5$
 $KM = 4x$



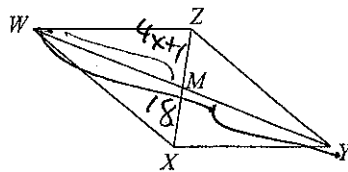
$$\begin{array}{r} 2(3x - 5) = 4x \\ 6x - 10 = 4x \\ -6x \quad -6x \\ \hline -10 = -2x \\ \frac{-10}{-2} = \frac{-2x}{-2} \\ \boxed{x = 5} \end{array}$$

12) $OY = 19$
 $WY = 11x + 5$



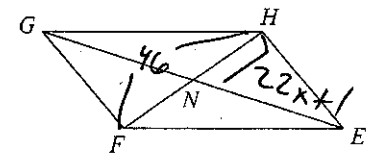
$$\begin{array}{r} 2(19) = 11x + 5 \\ 38 = 11x + 5 \\ -5 \quad -5 \\ \hline 33 = 11x \\ \frac{33}{11} = \frac{11x}{11} \\ \boxed{x = 3} \end{array}$$

13) $YW = 18$
 $MW = 4x + 1$



$$\begin{array}{r} 2(4x + 1) = 18 \\ 8x + 2 = 18 \\ -2 \quad -2 \\ \hline 8x = 16 \\ \frac{8x}{8} = \frac{16}{8} \\ \boxed{x = 2} \end{array}$$

14) $FH = 46$
 $NH = 22x + 1$



$$\begin{array}{r} 2(22x + 1) = 46 \\ 44x + 2 = 46 \\ -2 \quad -2 \\ \hline 44x = 44 \\ \frac{44x}{44} = \frac{44}{44} \\ \boxed{x = 1} \end{array}$$