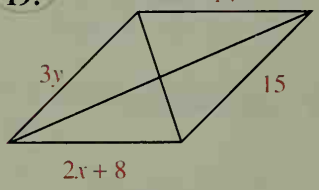
The coordinates of three vertices of $\square ABCD$ are given. Plot the points and find the coordinates of the fourth vertex.

17. $A(1, 0)$, $B(5, 0)$, $C(7, 2)$, $D(\underline{?}, \underline{?})$

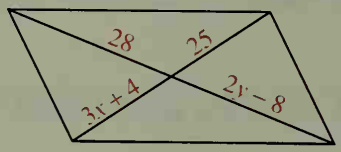
18. $A(3, 2)$, $B(8, 2)$, $C(\underline{?}, \underline{?})$, $D(0, 5)$

Each figure in Exercises 19–24 is a parallelogram with its diagonals drawn. Find the values of x and y.

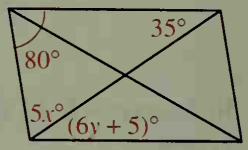
19.



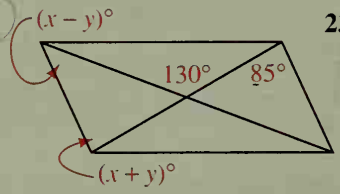
20.



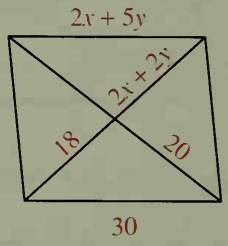
21.



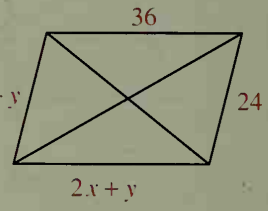
B **22.**



23.



24.



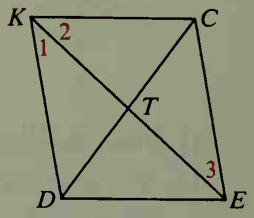
Quad. *DECK* is a parallelogram. Complete.

25. If $KT = 2x + y$, $DT = x + 2y$, $TE = 12$, and $TC = 9$, then $x =$ $\underline{?}$ and $y =$ $\underline{?}$.

26. If $DE = x + y$, $EC = 12$, $CK = 2x - y$, and $KD = 3x - 2y$, then $x =$ $\underline{?}$, $y =$ $\underline{?}$, and the perimeter of $\square DECK =$ $\underline{?}$.

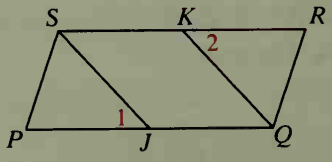
27. If $m\angle 1 = 3x$, $m\angle 2 = 4x$, and $m\angle 3 = x^2 - 70$, then $x =$ $\underline{?}$ and $m\angle CED =$ $\underline{?}$ (numerical answers).

28. If $m\angle 1 = 42$, $m\angle 2 = x^2$, and $m\angle CED = 13x$, then $m\angle 2 =$ $\underline{?}$ or $m\angle 2 =$ $\underline{?}$ (numerical answers).



29. Given: $\square PQRS$; $\overline{PJ} \cong \overline{RK}$
Prove: $\overline{SJ} \cong \overline{QK}$

30. Given: $\square JQKS$; $\overline{PJ} \cong \overline{RK}$
Prove: $\angle P \cong \angle R$



31. Given: $ABCD$ is a $\square$; $\overline{CD} \cong \overline{CE}$
Prove: $\angle A \cong \angle E$

32. Given: $ABCD$ is a $\square$; $\angle A \cong \angle E$
Prove: $\overline{AB} \cong \overline{CE}$