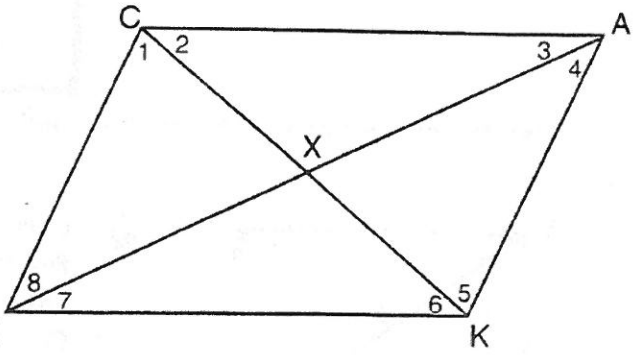
Name:_____

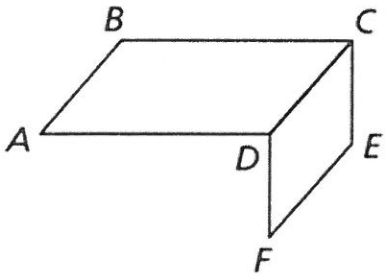
7.2 Practice Problems: Parallelograms



1. If CA = 10, EK = _____ .
2. If CK = 18, CX = _____ .
3. If $\angle CEK = 85°$, $\angle CAK$ = _____ .
4. If $\angle ECA = 130°$, $\angle CAK$ = _____ .
5. If $\angle 1 = 40°$ and $\angle 2 = 65°$, $\angle EKA$ = _____ .
6. If EX = 15, EA = _____ .
7. If CE = 12, KA = _____ .
8. If $\angle 8 = 25°$ and $\angle 7 = 35°$, $\angle EKA$ = _____ .
9. If CX = 5x – 44 and XK = 2x + 25, then x = _____ .
10. If $\angle 7 = 30°$ and $\angle 4 = 40°$, $\angle EKA$ = _____ .
11. If CE = 3x + 5 and AK = 7x – 15, then x = _____ .
12. If $\angle ECA = 6x - 20$ and $\angle EKA = 2x + 80$, then x = _____ .
13. If $\angle CAE = 35°$, $\angle AEK$ = _____ .
14. If $\angle 2 = 100°$ and $\angle 3 = 20°$, $\angle CXA$ = _____ .
15. If $\angle CEK = 80°$, $\angle EKA$ = _____ .
16. $\angle 1 + \angle 2 + \angle 3 + \angle 4 + \angle 5 + \angle 6 + \angle 7 + \angle 8$ = _____ .

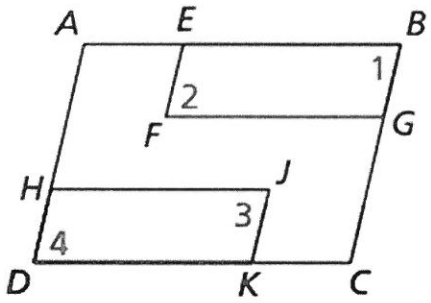
17. **Given** *ABCD* and *CEFD* are parallelograms.

Prove $\overline{AB} \cong \overline{FE}$



18. **Given** *ABCD*, *EBGF*, and *HJKD* are parallelograms.

Prove $\angle 2 \cong \angle 3$



19. Find the coordinates of the intersection of the diagonals.

B(-2, 5), A(2, 5), S(4, 0), E(0, 0)

Q(-1, 3), R(5, 2), S(1, -2), T(-5, -1)

20. Find the coordinates of the remaining vertex.

a) L(0, 2) E(-1, 5) G(4, 0)

b) A(-1, 4) R(5, 6) M(8, 0)

c) H(13, -22) R(-5, 17) D(10, 5) (you can use decimals)

21. The measure of one interior angle of a parallelogram is 50 degrees more than 4 times the measure of another angle. Find the measure of each interior angle of the parallelogram.

22. In Parallelogram LMNP, the ratio of LM to MN is 4:3. Find LM when the perimeter of LMNP is 28.