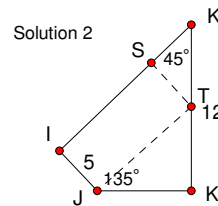
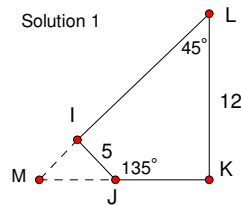


1. 26.5
2. 10
3. 5
4. 6
5. 24

6. **Solution 1:** Extend line \overline{IL} and \overline{JK} to meet at M . Since $\angle IJM = 180^\circ - 135^\circ = 45^\circ$, $\triangle IJM$ is a 45-45-90 isosceles triangle with $IJ = IM = 5$. Thus, $[IJM] = 12.5$. Since $\angle M = 45^\circ$, it follows that $L = 45^\circ$ so $\triangle LKM$ is also a 45-45-90 isosceles triangle with $LK = KM = 12$. Thus, $[LKM] = 72$. Therefore, $[IJKL] = 72 - 12.5 = \boxed{59.5}$.



Solution 2 : Draw the lines \overline{JT} and \overline{ST} such that $\overline{JT} \parallel \overline{IK}$ and $\overline{ST} \parallel \overline{IJ}$. $\triangle LST$ is a 45-45-90 isosceles triangle. $[LST] = 12.5$. $LT = 5\sqrt{2}$ so $TK = 12 - 5\sqrt{2}$. It follows that $[TKJ] = 97 - 60\sqrt{2}$ and $[IJTS] = 60\sqrt{2} - 50$. Thus, $[IJKL] = 47 + 12.5 = \boxed{59.5}$.

7. 38
8. 4