

Family

parent	child
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Gender

name	sex
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Who is X's mother?

Father = $\square_{name,child} \square_{sex='Male'} \square_{Gender} \triangleright \triangleleft_{name=parent} \square_{Family}$

Mother = $\square_{name,child} \square_{sex='Female'} \square_{Gender} \triangleright \triangleleft_{name=parent} \square_{Family}$

X's Mother = $\square_{name} \square_{sex='Female' \text{ and } child=X} \square_{Gender} \triangleright \triangleleft_{name=parent} \square_{Family}$

Who are X's children?

Children = Family

X's Children = $\square_{child} \square_{parent=X} \square_{Family}$

Son = $\square_{name,parent} \square_{sex='Male'} \left(\square_{Gender} \triangleright \triangleleft_{name=child} \square_{Family} \right) \square$

Daughter = $\square_{name,parent} \square_{sex='Female'} \left(\square_{Gender} \triangleright \triangleleft_{name=child} \square_{Family} \right) \square$

Who are X's parents?

Parent = Family

X's Parents = $\square_{parent} \square_{child=X} \square_{Family}$

Who are X's grandmothers?

$$X's \text{ Grandmothers} = \boxed{\text{name}} \begin{array}{|c|} \hline \boxed{\text{sex='Female'}} \\ \hline \end{array} \text{ and } \boxed{B.child=X} \begin{array}{|c|} \hline \boxed{A.parent, B.child} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^A} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^B} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Gender} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.parent=name} \\ \hline \end{array}$$

Who are X's grandparents?

$$X's \text{ Grandparents} = \boxed{A.parent} \begin{array}{|c|} \hline \boxed{B.child=X} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^A} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^B} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.child=B.parent} \\ \hline \end{array}$$

Who are X's grandchildren?

$$X's \text{ Grandchildren} = \boxed{B.child} \begin{array}{|c|} \hline \boxed{A.parent=X} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^A} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^B} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.child=B.parent} \\ \hline \end{array}$$

Who are X's uncles?

$$X's \text{ Uncles} = \boxed{B.child} \begin{array}{|c|} \hline \boxed{A.child \neq B.child} \\ \hline \end{array} \text{ and } \begin{array}{|c|} \hline \boxed{sex='Male'} \\ \hline \end{array} \text{ and } \begin{array}{|c|} \hline \boxed{C.child=X} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^A} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^B} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{B.child=name} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Gender} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.child=C.parent} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^C} \\ \hline \end{array}$$

$$U \begin{array}{|c|} \hline \boxed{husband} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Married} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{B.child=wife} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.child \neq B.child} \\ \hline \end{array} \text{ and } \begin{array}{|c|} \hline \boxed{sex='Female'} \\ \hline \end{array} \text{ and } \begin{array}{|c|} \hline \boxed{C.child=X} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^A} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^B} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{B.child=name} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Gender} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.child=C.parent} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^C} \\ \hline \end{array}$$

Which people are Aunts?

$$Aunts = \boxed{B.child} \begin{array}{|c|} \hline \boxed{A.child \neq B.child} \\ \hline \end{array} \text{ and } \begin{array}{|c|} \hline \boxed{sex='Female'} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^A} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^B} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{B.child=name} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Gender} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.child=C.parent} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^C} \\ \hline \end{array}$$

Who are X's cousins?

$$X's \text{ Cousins} = \boxed{C.child} \begin{array}{|c|} \hline \boxed{A.child \neq B.child} \\ \hline \end{array} \text{ and } \begin{array}{|c|} \hline \boxed{D.child=X} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{Family^D} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^A} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{D.parent=A.child} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^B} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{A.parent=B.parent} \\ \hline \end{array} \triangleright \triangleleft \begin{array}{|c|} \hline \boxed{Family^C} \\ \hline \end{array} \begin{array}{|c|} \hline \boxed{B.child=C.parent} \\ \hline \end{array}$$

