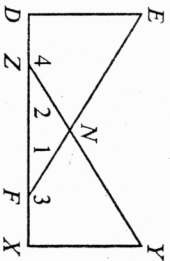


WRITTEN EXERCISES

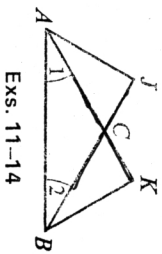
In Exs. 1-10 prove $\triangle DEF \cong \triangle XYZ$.



Exs. 1-10

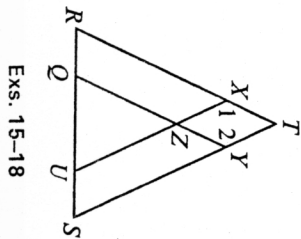
1. Given: $\overline{DE} \cong \overline{XY}$; $\overline{DF} \cong \overline{XZ}$; $\overline{EF} \cong \overline{YZ}$.
2. Given: $\angle E \cong \angle Y$; $\angle 1 \cong \angle 2$; $\overline{DF} \cong \overline{XZ}$.
3. Given: $\angle D$ and $\angle X$ are rt. \angle s; $\overline{EF} \cong \overline{YZ}$; $\angle E \cong \angle Y$.
4. Given: $\angle D$ and $\angle X$ are rt. \angle s; $\overline{EF} \cong \overline{YZ}$; $\angle 1 \cong \angle 2$.
5. Given: $\overline{ED} \perp \overline{DF}$; $\overline{YX} \perp \overline{XZ}$; $\overline{EF} \cong \overline{YZ}$; $\overline{DE} \cong \overline{XY}$.
6. Given: $\overline{ED} \perp \overline{DF}$; $\overline{YX} \perp \overline{XZ}$; $\overline{DF} \cong \overline{XZ}$; $\angle E \cong \angle Y$.
7. Given: $\overline{DZ} = \overline{XF}$; $\overline{ED} = \overline{YX}$; $m\angle D = m\angle X$.
8. Given: $\overline{EN} = \overline{YN}$; $\overline{NF} = \overline{NZ}$; $m\angle D = m\angle X$; $m\angle E = m\angle Y$.
9. Given: $\overline{ED} \parallel \overline{YX}$; $\overline{ED} \perp \overline{DX}$; $\overline{DE} = \overline{XY}$; $m\angle E = m\angle Y$.
10. Given: $\overline{YX} \perp \overline{DX}$; $\overline{YX} \parallel \overline{ED}$; $\overline{YX} = \overline{ED}$; $m\angle 1 = m\angle 2$.

In Exercises 11-14, $\triangle ABK$ and $\triangle BAJ$ lie in a plane.



Exs. 11-14

11. Given: $\angle JAB \cong \angle KBA$; $\angle 1 \cong \angle 2$.
Prove: $\triangle ABK \cong \triangle BAJ$.
12. Given: $\angle 1 \cong \angle 2$; $\angle AJB \cong \angle BKA$.
Prove: $\triangle ABK \cong \triangle BAJ$.
13. Given: $AK = BJ$; $AC = BC$.
Prove: $\triangle ACJ \cong \triangle BCK$.
14. Given: $m\angle JAB = m\angle KBA$; \overline{AK} bisects $\angle JAB$; \overline{BJ} bisects $\angle KBA$.
Prove: $\triangle ABK \cong \triangle BAJ$.
15. Given: $\overline{XU} \parallel \overline{TS}$; $\overline{YQ} \parallel \overline{TR}$; $m\angle R = m\angle S$; $\overline{RQ} = \overline{US}$.
Prove: $\triangle RUX \cong \triangle SQY$.



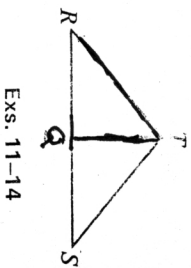
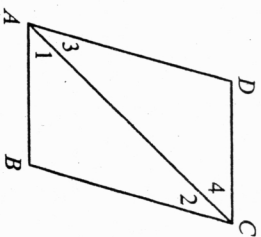
Exs. 15-18

16. Given: $\angle 1 \cong \angle 2$; $\overline{QZ} \cong \overline{UZ}$; $\overline{ZX} \cong \overline{ZY}$; $\overline{RT} \cong \overline{ST}$; $\overline{XT} \cong \overline{YT}$.
Prove: $\triangle RUX \cong \triangle SQY$.
17. Given: $\angle T \cong \angle XZY$; $\angle RUX \cong \angle S$; $\overline{RQ} \cong \overline{US}$.
Prove: $\triangle RUX \cong \triangle QSY$.
18. Given: $\overline{XU} \parallel \overline{TS}$; $\angle YQS$ supplementary to $\angle XUS$; $RU = QS$; $\angle R \cong \angle S$.
Prove: $\triangle RUX \cong \triangle QSY$.

A

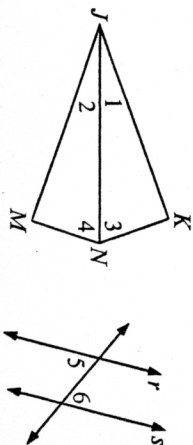
1. Given: $\overline{AB} \cong \overline{CD}$; $\overline{BC} \cong \overline{DA}$.
Prove: $\angle B \cong \angle D$.
2. Given: $\overline{AB} \cong \overline{CD}$; $\angle 1 \cong \angle 4$.
Prove: $\overline{AD} \cong \overline{CB}$.
3. Given: $\angle 1 \cong \angle 4$; $\angle 2 \cong \angle 3$.
Prove: $\overline{AB} \cong \overline{CD}$.
4. Given: $\angle 1 \cong \angle 4$; $\angle B \cong \angle D$.
Prove: $\overline{AD} \cong \overline{CB}$.
5. Given: $\overline{AB} \parallel \overline{DC}$; $\overline{AD} \parallel \overline{BC}$.
Prove: $AD = CB$.
6. Given: $\overline{AB} \parallel \overline{DC}$; $AB = CD$.
Prove: $m\angle 2 = m\angle 3$.
7. Given: $\overline{AD} \parallel \overline{BC}$; $AD = CB$.
Prove: $AB = CD$.
11. Given: \overline{TQ} bisects $\angle RTS$; $\angle R \cong \angle S$.
Prove: $\overline{TQ} \perp \overline{RS}$.
12. Given: \overline{TQ} bisects \overline{RS} ; $\overline{RT} \cong \overline{ST}$.
Prove: $\overline{TQ} \perp \overline{RS}$.
13. Given: $\overline{TQ} \perp \overline{RS}$; \overline{TQ} bisects $\angle RTS$.
Prove: $RT = ST$.
14. Given: \overline{TQ} is the \perp bisector of \overline{RS} .
Prove: $m\angle R = m\angle S$.

Exs. 1-10

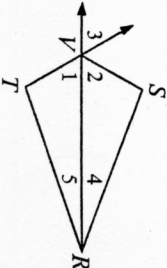


Exs. 11-14

15. Given: $\angle 3 \cong \angle 5$; $\angle 4 \cong \angle 6$; $\overline{JK} \cong \overline{JM}$; $\overline{NK} \cong \overline{NM}$.
Prove: $r \parallel s$.
16. Given: $\angle 3 \cong \angle 5$; $\angle 4 \cong \angle 6$; $\angle 1 \cong \angle 2$; $r \parallel s$.
Prove: $\overline{JK} \cong \overline{JM}$.
17. Given: $\angle 2 \cong \angle 3$; $\angle 4 \cong \angle 5$.
Prove: $\overline{RS} \cong \overline{RT}$.
18. Given: $\angle 4 \cong \angle 5$; $\overline{RS} \cong \overline{RT}$.
Prove: $\angle 2 \cong \angle 3$.



Exs. 15, 16



Exs. 17, 18