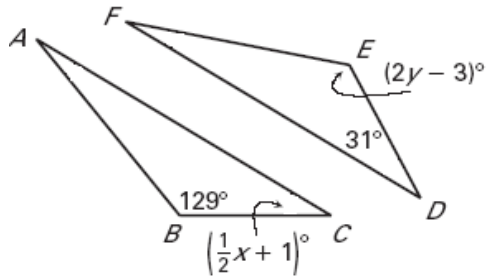
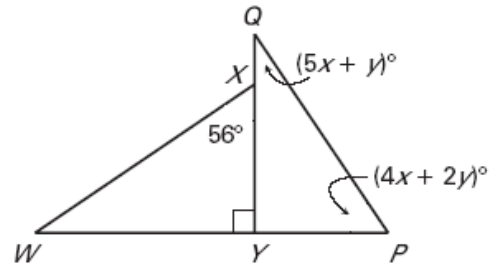


Using the given information in the diagrams below, please solve for x and y.

1. $\triangle ABC \cong \triangle FED$

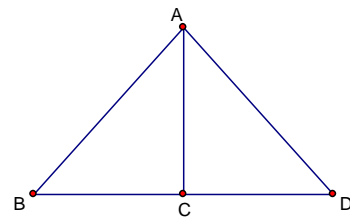


2. $\triangle XYW \cong \triangle PYQ$



3. Given: $\overline{AC} \perp \overline{BD}$ and C is midpoint of \overline{BD}

Prove: $\triangle ABD$ is isosceles

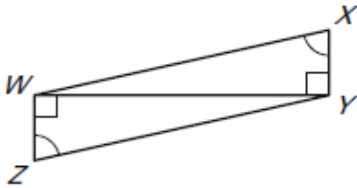


Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.

4. Complete the following proof.

Given: $\angle XYW \cong \angle ZWY$,
 $\angle WXY \cong \angle YZW$

Prove: $\overline{WX} \parallel \overline{ZY}$

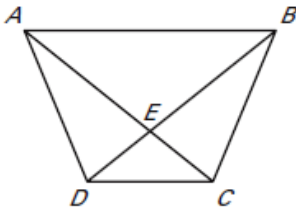


Statements	Reasons
1.	1.
2.	2.
3.	3.
4. $\triangle XYW \cong \triangle ZWY$	4.
5. $\angle XWY \cong \angle ZYW$	5.
6. $\overline{WX} \parallel \overline{ZY}$	6.

5. Complete the proof.

Given: $\angle EDC \cong \angle ECD$, $\angle ADE \cong \angle BCE$

Prove: $\angle DAE \cong \angle CBE$

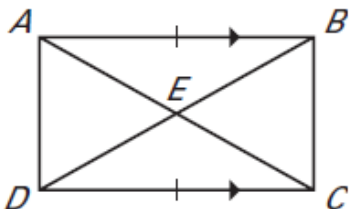


Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5. $\triangle AED \cong \triangle BEC$	5.
6. $\angle DAE \cong \angle CBE$	6.

6. Complete the proof.

Given: $\overline{AB} \parallel \overline{CD}$, $\overline{AB} \cong \overline{CD}$

Prove: $\overline{BC} \cong \overline{DA}$

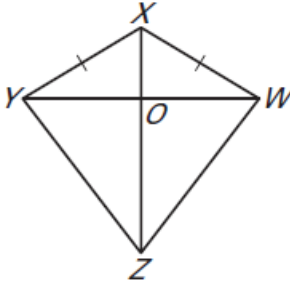


Statements	Reasons
1. $\overline{AB} \parallel \overline{CD}$	1.
2.	2.
3. $\overline{AB} \cong \overline{CD}$	3.
4.	4.
5. $\triangle ABC \cong \triangle CDA$	5.
6. $\overline{BC} \cong \overline{DA}$	6.

7. Complete the proof.

Given: $\overline{YX} \cong \overline{WX}$, \overline{ZX} bisects $\angle YXW$

Prove: $\overline{YZ} \cong \overline{WZ}$

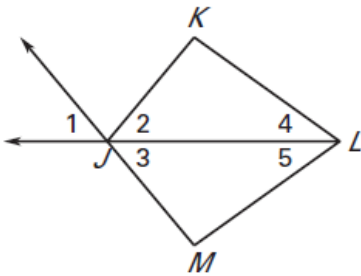


Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5. $\triangle YXZ \cong \triangle WXZ$	5.
6. $\overline{YZ} \cong \overline{WZ}$	6.

8. Complete the proof.

Given: $\angle 1 \cong \angle 2$, $\angle 4 \cong \angle 5$

Prove: $\overline{KL} \cong \overline{ML}$



Statements	Reasons
1. $\angle 1 \cong \angle 2$	1.
2. $\angle 1 \cong \angle 3$	2.
3. $\angle 2 \cong \angle 3$	3.
4.	4.
5.	5.
6. $\triangle KJL \cong \triangle MJL$	6.
7. $\overline{KL} \cong \overline{ML}$	7.

Answer Key:

1) $x = 60, y = 66$ 2) $x = 2, y = 24$

3)

Statements	Reasons
1. $\overline{AC} \perp \overline{BD}$	1. Given
2. $\angle ACB$ and $\angle ACD$ are right angles	2. Def. of perpendicular lines
3. $\triangle ACB$ and $\triangle ACD$ are right triangles	3. Def. of right triangles
4. C is the midpoint of \overline{BD}	4. Given
5. $\overline{BC} \cong \overline{DC}$	5. Def. of midpoint
6. $\overline{AC} \cong \overline{AC}$	6. Reflexive Property
7. $\triangle ACB \cong \triangle ACD$	7. SAS
8. $\angle ABC \cong \angle ADC$	8. CPCTC
9. $\triangle ABD$ is isosceles	9. Def. of Isosceles Triangle

4)

Statements	Reasons
1. $\angle XYW \cong \angle ZWY$	1. Given
2. $\angle WXY \cong \angle YZW$	2. Given
3. $\overline{WY} \cong \overline{WY}$	3. Reflexive Property
4. $\triangle XYW \cong \triangle ZWY$	4. AAS
5. $\angle XWY \cong \angle ZYW$	5. CPCTC
6. $\overline{WX} \parallel \overline{ZY}$	6. Alt. Int. Angles Converse

5)

Statements	Reasons
1. $\angle EDC \cong \angle ECD$	1. Given
2. $\overline{DE} \cong \overline{CE}$	2. Base Angles Converse
3. $\angle ADE \cong \angle BCE$	3. Given
4. $\angle AED \cong \angle BEC$	4. VAT
5. $\triangle AED \cong \triangle BEC$	5. ASA
6. $\angle DAE \cong \angle CBE$	6. CPCTC

6)

Statements	Reasons
1. $\overline{AB} \parallel \overline{CD}$	1. Given
2. $\angle BAE \cong \angle DCE$	2. Alt. Int. Angles Theorem
3. $\overline{AB} \cong \overline{CD}$	3. Given
4. $\overline{AC} \cong \overline{AC}$	4. Reflexive Property
5. $\triangle ABC \cong \triangle CDA$	5. SAS
6. $\overline{BC} \cong \overline{DA}$	6. CPCTC

7)

Statements	Reasons
1. $\overline{YX} \cong \overline{WX}$	1. Given
2. \overline{ZX} bisects $\angle YXW$	2. Given
3. $\angle YXZ \cong \angle WXZ$	3. Def. of Angle Bisector
4. $\overline{XZ} \cong \overline{XZ}$	4. Reflexive Property
5. $\triangle YXZ \cong \triangle WXZ$	5. SAS
6. $\overline{YZ} \cong \overline{WZ}$	6. CPCTC

8)

Statements	Reasons
2. $\angle 1 \cong \angle 2$	1. Given
2. $\angle 1 \cong \angle 3$	2. VAT
3. $\angle 2 \cong \angle 3$	3. Transitive Property
4. $\angle 4 \cong \angle 5$	4. Given
5. $\overline{JL} \cong \overline{JL}$	5. Reflexive Property
6. $\triangle KJL \cong \triangle MJL$	6. ASA
7. $\overline{KL} \cong \overline{ML}$	7. CPCTC