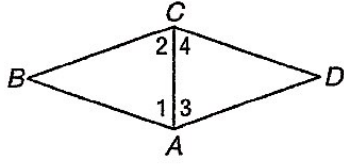


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25. Complete the proof below by supplying the reasons for each location.



Given:  $\overline{AC}$  bisects  $\angle BAD$ .

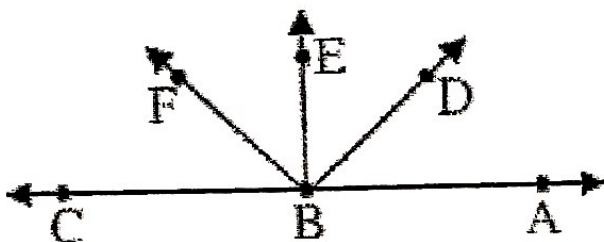
$\overline{AC}$  bisects  $\angle BCD$ .

$\angle 1 \cong \angle 2$

Prove:  $\angle 3 \cong \angle 4$

Statements	Reasons
1. $\overline{AC}$ bisects $\angle BAD$ .	1. <u>Given</u>
2. $\overline{AC}$ bisects $\angle BCD$ .	2. <u>Given</u>
3. $\angle 1 \cong \angle 2$	3. <u>Given</u>
4. $\angle 1 \cong \angle 3$ and $\angle 2 \cong \angle 4$	4. <u>Def. of <math>\angle</math> bisector</u>
5. $\angle 3 \cong \angle 4$	5. <u>subst.</u>

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26. Given:  $\angle ABE \cong \angle CBE$ Prove:  $\angle ABD$  and  $\angle DBE$  are compl.

1.  $\angle ABE \cong \angle CBE$

2.  $\angle ABE + \angle CBE = 180$

3.  $\angle ABE + \angle ABE = 180$

4.  $\frac{2\angle ABE}{2} = \frac{180}{2}$

5.  $\angle ABE = 90$

6.  $\angle ABE = \angle ABD + \angle DBE$

7.  $90 = \angle ABD + \angle DBE$

8.  $\angle ABD$  and  $\angle DBE$  are compl.

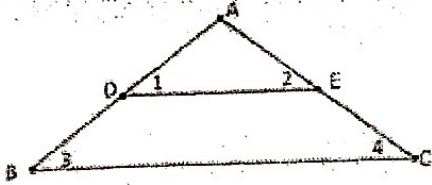
1. given

2. L.P. supp3. Subst.4. CLT5. DIVISION6.  $\angle$  addition7. Subst.

8. def. of compl.

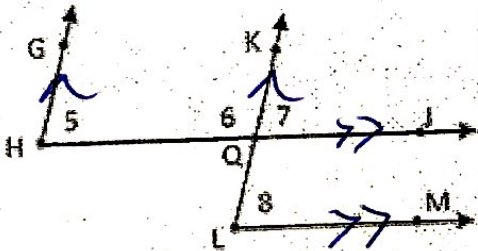
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27. Given:  $DE \parallel BC$  and  $\angle 1 \cong \angle 2$   
 Prove:  $\angle 3 \cong \angle 4$



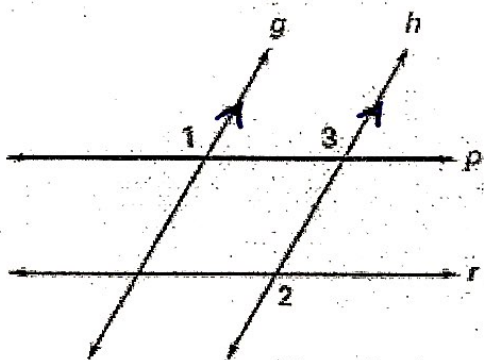
Statements	Reasons
1. $DE \parallel BC, \angle 1 \cong \angle 2$	1. Given
2. $\angle 1 \cong \angle 3$ , and $\angle 4 \cong \angle 2$	2. Corr. $\cong$
3. $\angle 3 \cong \angle 4$	3. subst.

28. Given:  $HJ \parallel LM, HG \parallel LK$   
 Prove:  $\angle 5 \cong \angle 8$



Statements	Reasons
1. $HJ \parallel LM, HG \parallel LK$	1. Given
2. $\angle 5 \cong \angle 7$	2. Corr. $\cong$
3. $\angle 7 \cong \angle 8$	3. Corr. $\cong$
4. $\angle 5 \cong \angle 8$	4. subst.

29. Given:  $g \parallel h$ ,  $\angle 1 \cong \angle 2$   
 Prove:  $p \parallel r$



Statements	Reasons
1. $g \parallel h$	1. Given
2. $\angle 1 \cong \angle 3$	2. Corr. $\cong$
3. $\angle 1 \cong \angle 2$	3. Given
4. $\angle 3 \cong \angle 2$	4. subst.
5. $p \parallel r$	5. Alt. ext. $\cong \Rightarrow \parallel$ lines