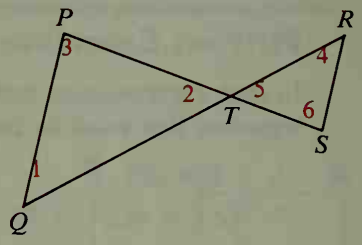
20. Given: $\angle 1 \cong \angle 2$; $\angle 4 \cong \angle 5$
What can you prove about $\overline{PQ}$ and $\overline{RS}$? Be prepared to give your reasons in class, if asked.

21. Given: $\angle 3 \cong \angle 6$
What can you prove about other angles? Be prepared to give your reasons in class, if asked.



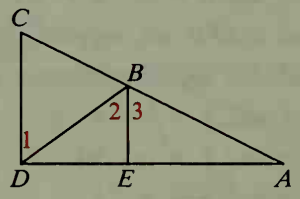
22. Copy what is shown for Theorem 3-6 on page 84. Then write a proof in two-column form.

23. Copy what is shown for Theorem 3-7 on page 84. Then write a proof in two-column form.

24. Given: $\overline{BE}$ bisects $\angle DBA$; $\angle 3 \cong \angle 1$
Prove: $\overline{CD} \parallel \overline{BE}$

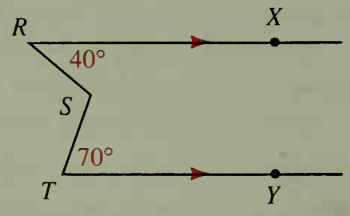
25. Given: $\overline{BE} \perp \overline{DA}$; $\overline{CD} \perp \overline{DA}$
Prove: $\angle 1 \cong \angle 2$

26. Given: $\angle C \cong \angle 3$; $\overline{BE} \perp \overline{DA}$
Prove: $\overline{CD} \perp \overline{DA}$

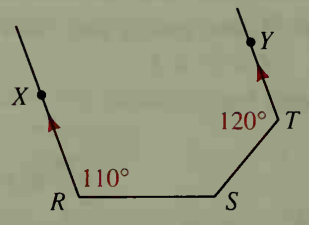


Find the measure of $\angle RST$. (*Hint*: Draw a line through S parallel to $\overline{RX}$ and $\overline{TY}$.)

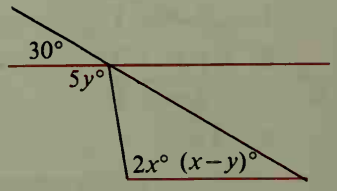
27.



28.



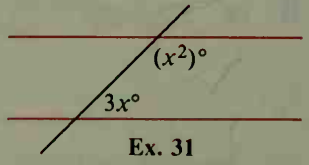
29. Find the values of x and y that make the lines shown in red parallel.



Ex. 29

C **30.** Draw two parallel lines cut by a transversal. Then draw the bisectors of two corresponding angles. What appears to be true about the bisectors? Prove that your conclusion is true.

31. Find the value of x that makes the lines shown in red parallel.



Ex. 31