

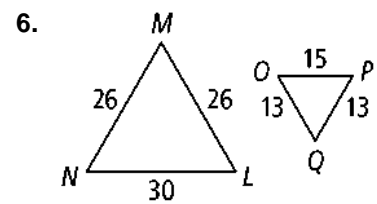
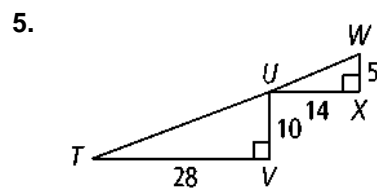
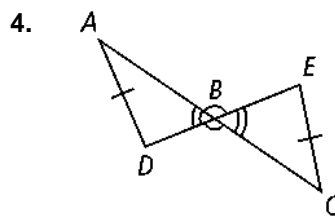
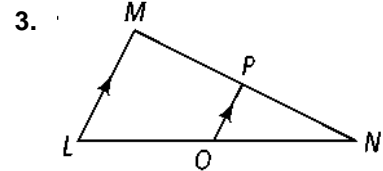
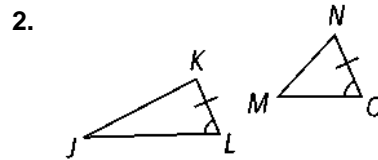
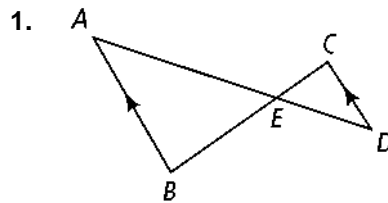
7-3

Practice

Form G

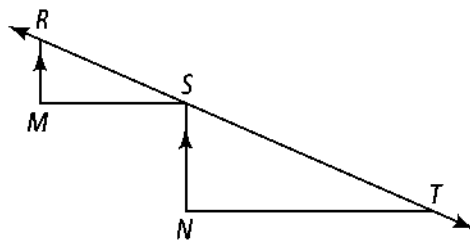
Proving Triangles Similar

Determine whether the triangles are similar. If so, write a similarity statement and name the postulate or theorem you used. If not, explain.



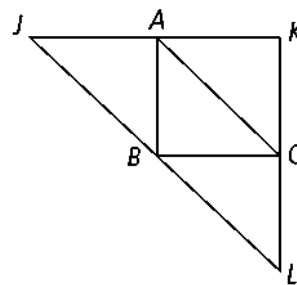
7. **Given:** $\overline{RM} \parallel \overline{SN}$, $\overline{RM} \perp \overline{MS}$,
 $\overline{SN} \perp \overline{NT}$

Prove: $\triangle RSM \sim \triangle STN$



8. **Given:** A bisects \overline{JK} , C bisects \overline{KL} , B bisects \overline{JL}

Prove: $\triangle JKL \sim \triangle CBA$



9. A 1.4-m tall child is standing next to a flagpole. The child's shadow is 1.2 m long. At the same time, the shadow of the flagpole is 7.5 m long. How tall is the flagpole?

7-3

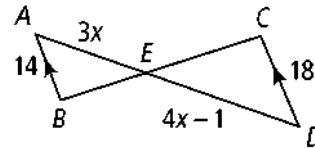
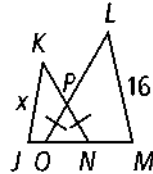
Practice (continued)

Form G

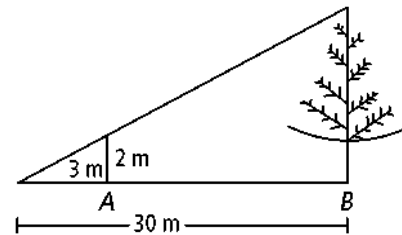
Proving Triangles Similar

Explain why the triangles are similar. Then find the value of x .

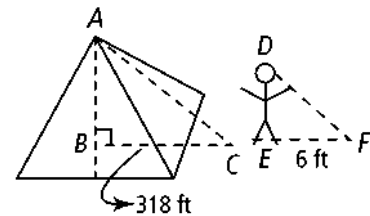
10. $\overline{OP} \cong \overline{NP}$, $KN = 15$,
 $LO = 20$, $JN = 9$,
 $MO = 12$



12. A stick 2 m long is placed vertically at point B . The top of the stick is in line with the top of a tree as seen from point A , which is 3 m from the stick and 30 m from the tree. How tall is the tree?



13. Thales was an ancient philosopher familiar with similar triangles. One story about him says that he found the height of a pyramid by measuring its shadow and his own shadow at the same time. If the person is 5-ft tall, what is the height of the pyramid in the drawing?



Identify the similar triangles in each figure. Explain.

