

### 4.3-4.4 worksheet

Name: \_\_\_\_\_

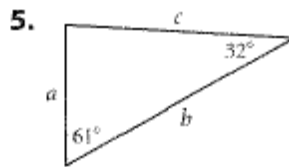
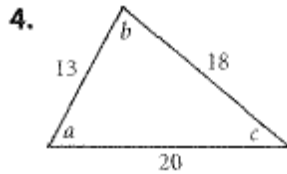
In exercises 1-2, determine if it is possible to create a triangle with the given measures. If possible, write yes. If not, explain why.

1. 16 cm, 30 cm, 45 cm

2. 9 km, 17 km, 28 km

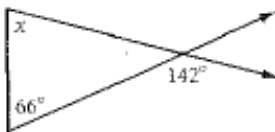
3. If 17 and 36 are length of two sides of a triangle, what is the range of possible values for the length of the third side?

In exercises 4-5, arrange the unknown measures in order from greatest to least.



In exercises 7-8, find the missing measures.

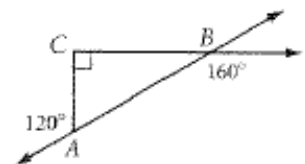
7.  $x =$  \_\_\_\_\_



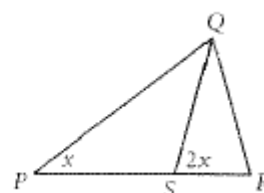
8.  $x =$  \_\_\_\_\_



9. What's wrong with this picture?



10. Explain why  $\triangle PQS$  is isosceles.

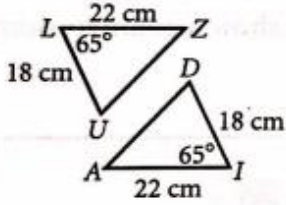


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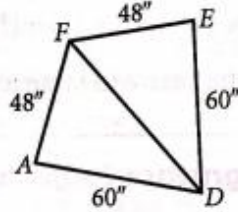
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In the exercises below, decide whether the triangles are congruent and name the congruence shortcut used. If the triangles cannot be shown to be congruent as labeled, write "cannot be determined."

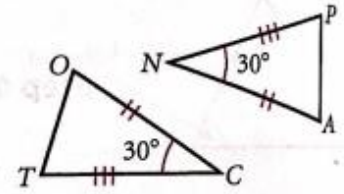
4. Which conjecture tells you  $\triangle LUZ \cong \triangle IDA$ ? (h)



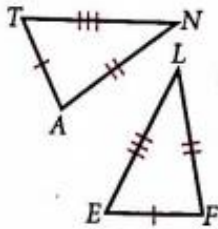
5. Which conjecture tells you  $\triangle AFD \cong \triangle EFD$ ? (h)



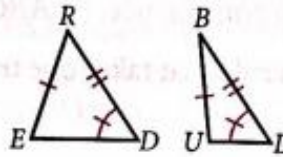
6. Which conjecture tells you  $\triangle COT \cong \triangle NPA$ ?



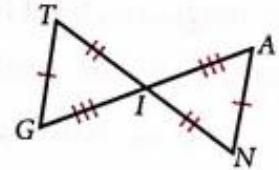
12.  $\triangle ANT \cong \triangle ?$  (h)  
Is  $\angle N \cong \angle L$ ? Explain why.



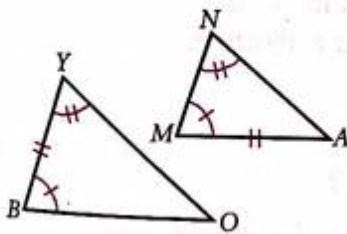
13.  $\triangle RED \cong \triangle ?$



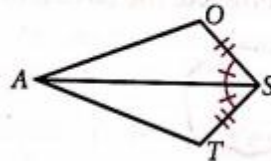
14.  $\triangle GIT \cong \triangle ?$   
Is  $\angle G \cong \angle A$ ? Explain why.



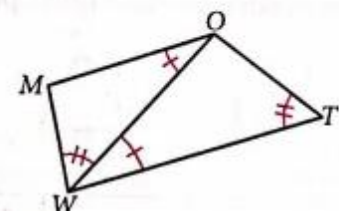
15.  $\triangle MAN \cong \triangle ?$  (h)



16.  $\triangle SAT \cong \triangle ?$   
Is  $\overline{AO} \cong \overline{AT}$ ? Explain why.



17.  $\triangle WOM \cong \triangle ?$   
Is  $\overline{WO} \cong \overline{WT}$ ? Explain why.



18. The perimeter of  $\triangle ABC$  is 180 m. Is  $\triangle ABC \cong \triangle ADE$ ?

