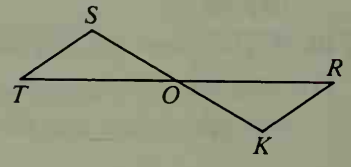
Written Exercises

Suppose $\triangle BIG \cong \triangle CAT$. Complete.

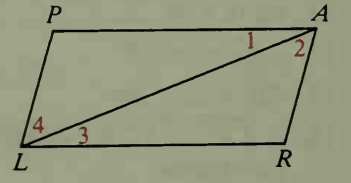
A

1. $\angle G \cong$ ___?___
2. ___?___ $= m\angle A$
3. $BI =$ ___?___
4. ___?___ $\cong \overline{AT}$
5. $\triangle IGB \cong$ ___?___
6. ___?___ $\cong \triangle CTA$

7. If $\triangle DEF \cong \triangle RST$, $m\angle D = 100$, and $m\angle F = 40$, name four congruent angles.
8. Is the statement "Corresponding parts of congruent triangles are congruent" based on a definition, postulate, or theorem?
9. Suppose $\triangle LXR \cong \triangle FNE$. List six congruences that can be justified by the following reason: Corr. parts of $\cong$ $\triangle$ are $\cong$.
10. The two triangles shown are congruent. Complete.
    a. $\triangle STO \cong$ ___?___
    b. $\angle S \cong$ ___?___ because ___?___.
    c. $\overline{SO} \cong$ ___?___ because ___?___.
    Then point O is the midpoint of ___?___.
    d. $\angle T \cong$ ___?___ because ___?___.
    Then $\overline{ST} \parallel \overline{RK}$ because ___?___.



11. The two triangles shown are congruent. Complete.
    a. $\triangle PAL \cong$ ___?___
    b. $\overline{PA} \cong$ ___?___
    c. $\angle 1 \cong$ ___?___ because ___?___.
    Then $\overline{PA} \parallel$ ___?___ because ___?___.
    d. $\angle 2 \cong$ ___?___ because ___?___.
    Then ___?___ $\parallel$ ___?___ because ___?___.



Plot the given points on graph paper. Draw $\triangle FAT$. Locate point C so that $\triangle FAT \cong \triangle CAT$.

12. $F(1, 2)$ $A(4, 7)$ $T(4, 2)$
13. $F(7, 5)$ $A(-2, 2)$ $T(5, 2)$

Plot the given points on graph paper. Draw $\triangle ABC$ and $\triangle DEF$. Copy and complete the statement $\triangle ABC \cong$ ___?___.

B

14. $A(-1, 2)$ $B(4, 2)$ $C(2, 4)$ $D(5, -1)$ $E(7, 1)$ $F(10, -1)$
15. $A(-7, -3)$ $B(-2, -3)$ $C(-2, 0)$ $D(0, 1)$ $E(5, 1)$ $F(0, -2)$
16. $A(-3, 1)$ $B(2, 1)$ $C(2, 3)$ $D(4, 3)$ $E(6, 3)$ $F(6, 8)$
17. $A(1, 1)$ $B(8, 1)$ $C(4, 3)$ $D(3, -7)$ $E(5, -3)$ $F(3, 0)$

Plot the given points on graph paper. Draw $\triangle ABC$ and $\overline{DE}$. Find two locations of point F such that $\triangle ABC \cong \triangle DEF$.

18. $A(1, 2)$ $B(4, 2)$ $C(2, 4)$ $D(6, 4)$ $E(6, 7)$
19. $A(-1, 0)$ $B(-5, 4)$ $C(-6, 1)$ $D(1, 0)$ $E(5, 4)$