Congruent Parts
Do Work on Sheet

1) $\triangle RST \cong \triangle XYZ$. Complete each statement.

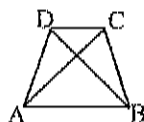$\overline{ST} \cong$ _____ $<T \cong$ _____ $\overline{XZ} \cong$ _____ $\triangle TRS \cong$ _____

2) $\triangle ADB \cong \triangle BCA$. Complete each statement.

a) $\overline{BD} \cong$ _____

b) $\triangle ABD \cong$ _____

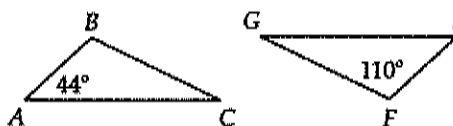c) $\overline{AD} \cong$ _____

d) $\triangle DAB \cong$ _____

3) Given: $\triangle ABC \cong \triangle EFG$.

Find the measure of:

a) $<E$ _____

b) $<B$ _____

c) $<C$ _____

4) $\triangle GHI \cong \triangle LMN$. Which is **not** a congruence statement for these triangles?
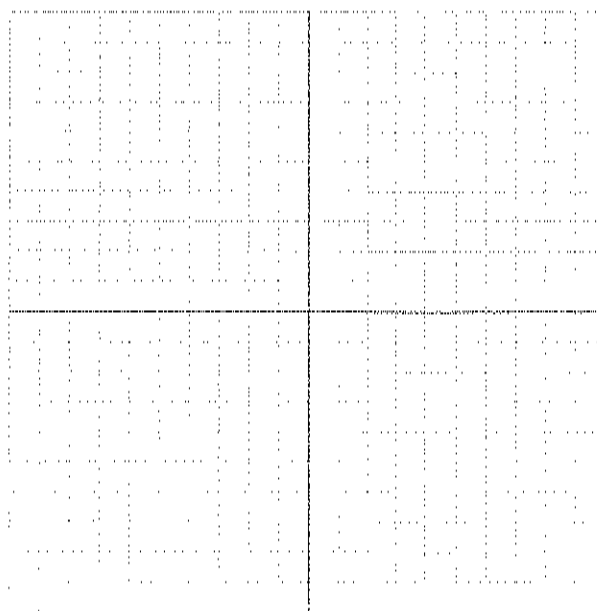
1) $\triangle HGI \cong \triangle MLN$ 2) $\triangle HIG \cong \triangle MNL$ 3) $\triangle IHG \cong \triangle MNL$ 4) $\triangle GIH \cong \triangle LNM$

5) Two squares are congruent if and only if:

1) any two corresponding angles are congruent   3) two pairs of corresponding angles are congruent

2) all four pairs of angles are congruent   4) a side of one is congruent to a side of another.

6) Given $\triangle ABC$ with A(3, -2), B(5, 1), and C(-1, 3), graph and state the coordinates of $\triangle A"B"C"$, the image of $\triangle ABC$ after r_{x-axis} followed by $r_{y=-x}$. What single transformation will map $\triangle ABC$ directly onto $\triangle A"B"C"$?

Continue with the work on the back

5) What is the image of P(-4, 6) under the composition $r_{y\text{-axis}}$ followed by a reflection over a vertical line through the x-axis at 2?
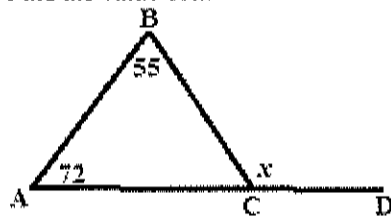
1) (-8, 6) 2) (4, -2)

3) (6, 0) 4) (0, 6)

6) Find the coordinates of A' after $r_{y\text{-axis}}$ followed by $r_{y=x}$ if the coordinates of A are (6, 1).

7) What are the coordinates of P', the image of point P(2, 3) under the transformation $r_{x\text{-axis}}$ followed by a reflection in the horizontal line through the y-axis at 4?

8) If A = (-2, 3), what is A' after the transformation D_3 followed by $r_{y\text{-axis}}$?

1) (-6, -9) 2) (9, -6)

3) (5, 6) 4) (6, 9)

9) Find the value of x.

10) Multiply: $\left(4.8\times10^{-1}\right)\left(5.3\times10^{7}\right)$. Write your answer in scientific notation.

11) Divide: $\left(42a^5b^6c^4\right)\div\left(-7a^2bc^4\right)$

12) Multiply: $(3x^{-2}y^4)(6xy^3)^{-3}$