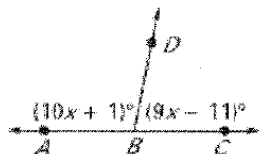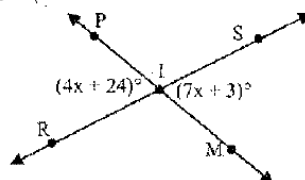Name: _____ Date: _____

Unit 1 Test Review

Missing Angles: Solve for x.

1.

$(10x + 1)°$ $(9x - 11)°$

2.

$(4x + 24)°$ $(7x + 3)°$

3.

$89°$

$(5x - 6)°$

$57°$

4.

72

x 148

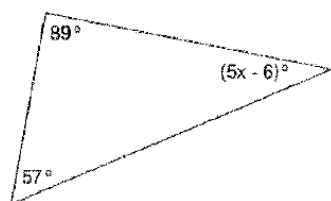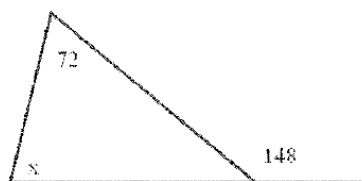
5. $\angle 1$ and $\angle 2$ are complementary. Solve for x and the measure of both angles.

$\angle 1 = 12x + 4$

$\angle 2 = 9x + 2$

---

6. The measure of one angle is 38 less than the measure of its supplement.
Find the measure of each angle.

---

7. One of two supplementary angles is $123°$ less than twice its supplement. Find the measure of both angles.

Parallel Lines:

Name the angles listed and the special property of each pair.

8. $\angle 1$ and $\angle 5$ _____

9. $\angle 4$ and $\angle 6$ _____

10. $\angle 2$ and $\angle 8$ _____

11. $\angle 4$ and $\angle 5$ _____
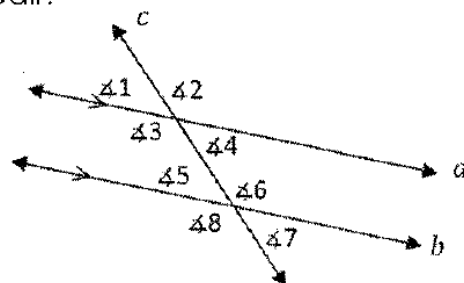
12. Given m || n and m∠8, find the measures of all the numbered angles in the figure.

m∠8 = 112°

m∠1 = _____   m∠2 = _____

m∠3 = _____   m∠4 = _____

m∠5 = _____   m∠6 = _____   m∠7 = _____

Solve for x.
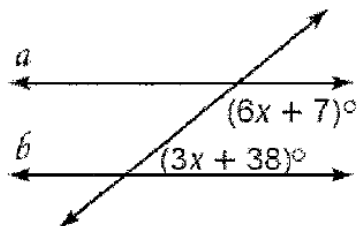
13.

$(3x - 50)°$
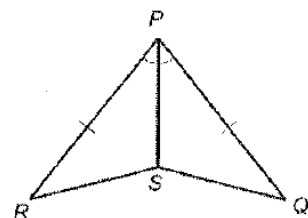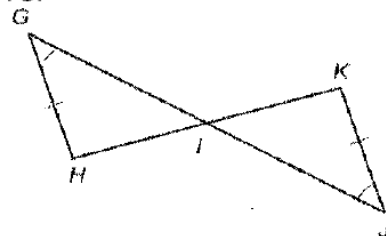
$(2x - 5)°$

14.

$(6x + 7)°$

$(3x + 38)°$
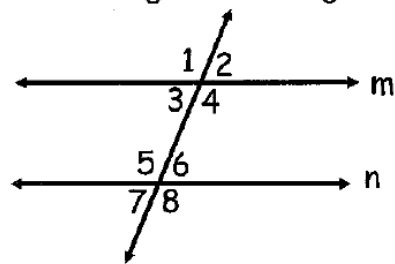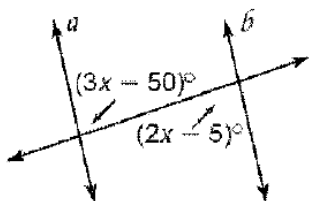
Congruent Triangles:
Determine whether each pair of triangles is congruent (SSS, SAS, ASA, AAS, or HL). If not, write not congruent.

15.

16.
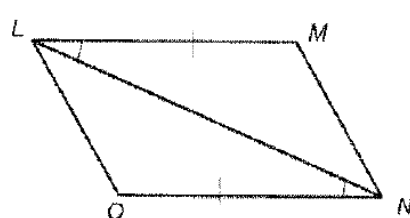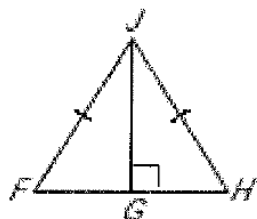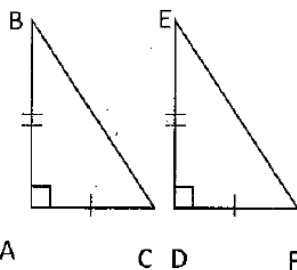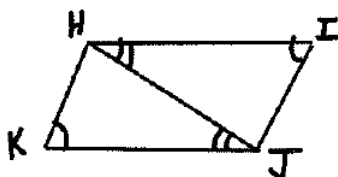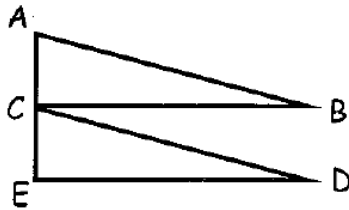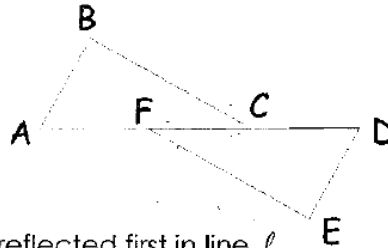

17.

18.

19.

20. ΔABC ≅ ΔDEF. What is congruent to ∠EDF?

---

21. Complete the following proof:

Statement	Reason
1. ∠I ≅ ∠K	1.
2. ∠IHJ ≅ ∠KJH	2.
3.	3.
4. ΔHJK ≅ ΔJHI	4.

Name the transformation that maps:

1. ΔABC→ΔCDE

2. ΔABC→ΔDEF

3. ΔPMR→ΔPMQ
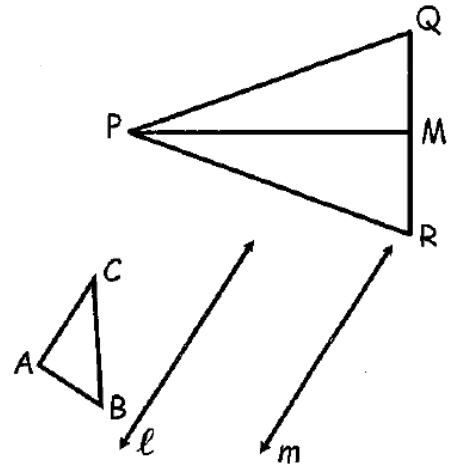
4. In the diagram, ℓ ∥ m and ΔABC is reflected first in line ℓ and then in line m. This set of reflections is equivalent to doing what kind of singular transformation?
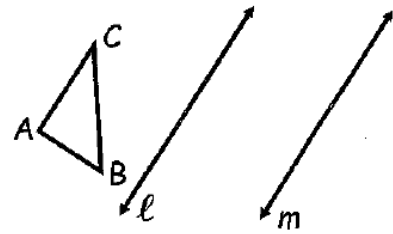
Describe any **rotations** (of 180° or less) that will map each figure onto itself.
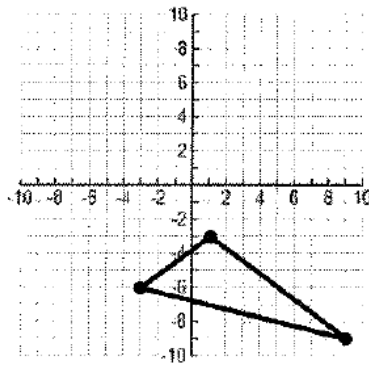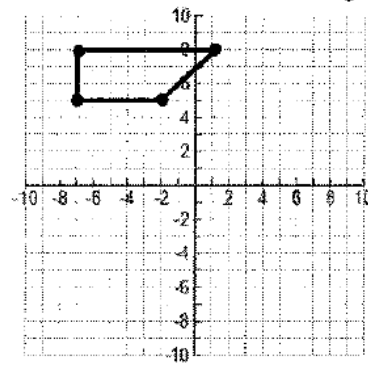
5.

6.

7.

8.
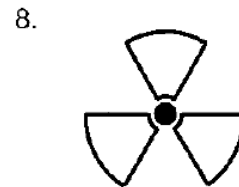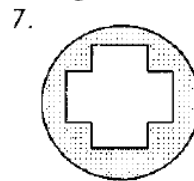
Draw the image of each figure, using the given transformation.

9. Translation (x, y) → (x − 8, y − 3)
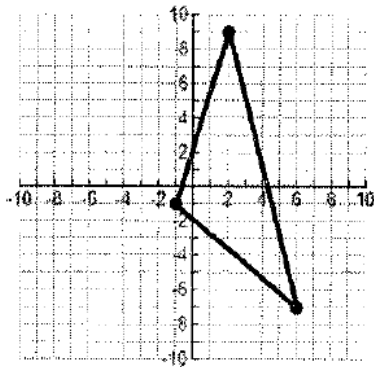
10. Reflection across the **x-axis**.
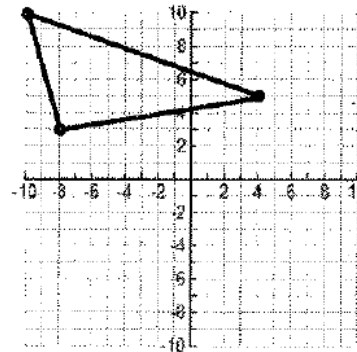
11. Reflection across the line x = -2
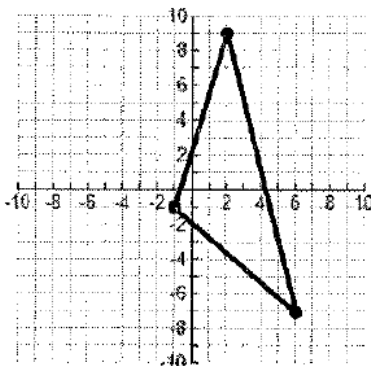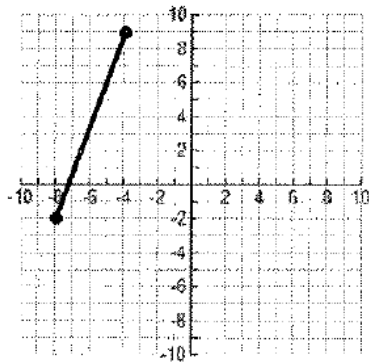

12. Reflection across the **y-axis**.
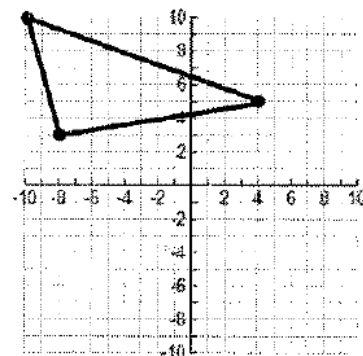
13. Rotation **180°** about the origin

14. Rotation **90° clockwise** about the origin.

15. Translation (x, y) → (x + 9, y − 8)
    Rotation 180° about the origin.

16. **Rotation 90° CCW** about the origin
    Reflection about the line **y = x.**