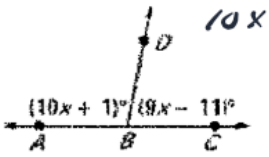
Name: _____ Date: _____

Unit 1 Test Review

Missing Angles: Solve for x.

1. Linear Pair



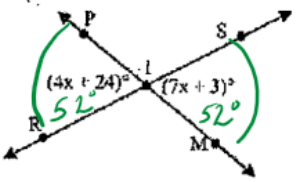
$10x+1+9x-11=180$

$19x-10=180$

$\frac{19x}{19}=\frac{190}{19}$

$x=10$

2. Vertical ∠s



$4x+24=7x+3$

$\frac{21}{3}=\frac{3x}{3}$

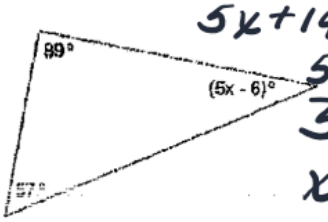
$7=x$

3. $89+5x-6+57=180$

$5x+140=180$

$\frac{5x}{5}=\frac{40}{5}$

$x=8$

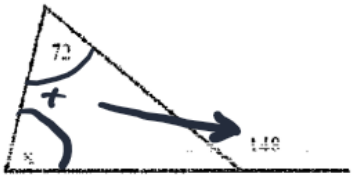


4. Remote Int. ∠ Theorem

$72+x=148$

$x=76$

check: $72+76=148$



5. ∠1 and ∠2 are complementary (90). Solve for x and the measure of both angles.

∠1 = 12x + 4

∠2 = 9x + 2

$12x+4+9x+2=90$

$21x+6=90$

$\frac{21x}{21}=\frac{84}{21}$

$x=4$

$\angle 1=52°$

$\angle 2=38°$

90°

6. The measure of one angle is 38 less than the measure of its supplement (180). Find the measure of each angle.

$x-38+x=180$

$\frac{2x}{2}=\frac{218}{2}$

$x=109$

71°

109°

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

$x+2x-123=180$

$\frac{3x}{3}=\frac{303}{3}$

$x=101°$ & $9°$

Parallel Lines:

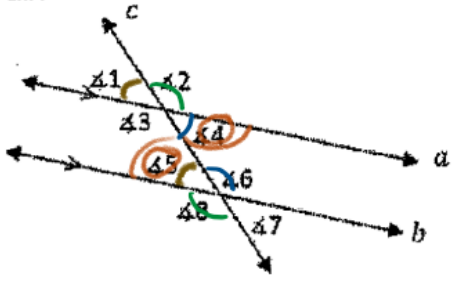
Name the angles listed and the special property of each pair.

8. ∠1 and ∠5 Corresponding & Congruent

9. ∠4 and ∠6 Consecutive Int. or Supple.

10. ∠2 and ∠8 Alt Ext. Ls & ≅.

11. ∠4 and ∠5 Alt. Int. Ls & ≅.



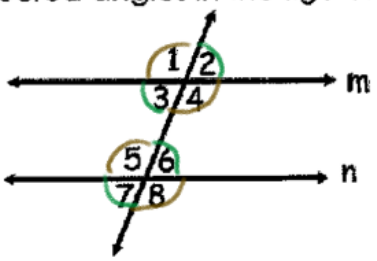
12. Given m | | n and m∠8, find the measures of all the numbered angles in the figure.

m∠8 = 112°

m∠1 = 112° m∠2 = 68°

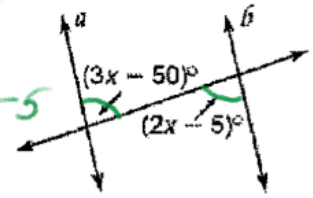
m∠3 = 68° m∠4 = 112°

m∠5 = 112° m∠6 = 68° m∠7 = 68°



Solve for x. Alt. Int. ∠s Consecutive Int. ∠s or Supplem.

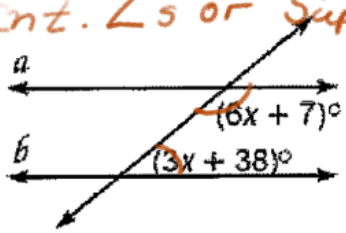
13.



$3x-50=2x-5$

$x=45°$

14.



$6x+7+3x+38=180$

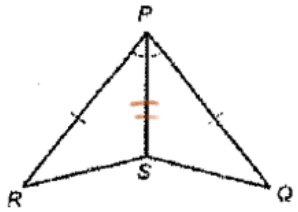
$9x+45=180$

$\frac{9x}{9}=\frac{135}{9}$

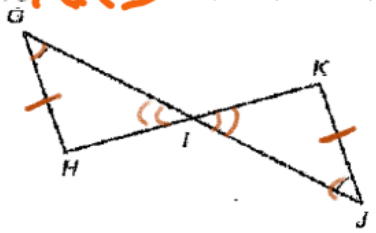
$x=15$

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

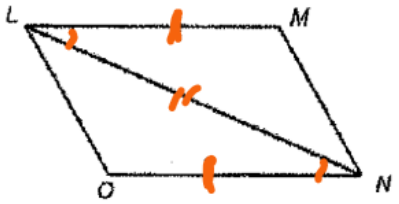
15. SAS



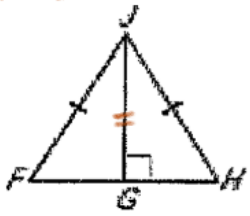
16. AAS



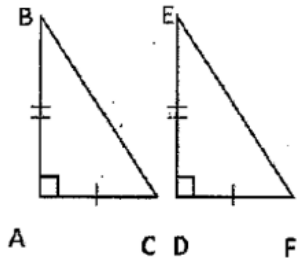
17. SAS



18. HL



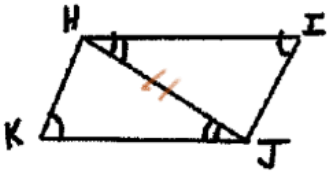
19. SAS



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

∠BAC

21. Complete the following proof:



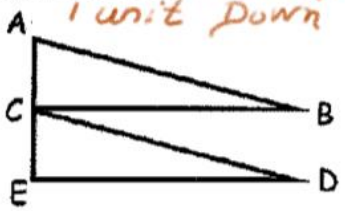
Statement	Reason
1. $\angle I \cong \angle K$	1. Given
2. $\angle IHJ \cong \angle KJH$	2. Given
3. $\overline{HJ} \cong \overline{JH}$	3. Reflexive Prop.
4. $\Delta HJK \cong \Delta JHI$	4. AAS

GSE Geometry | Unit 1 – Transformations | 1.8 – Review #1

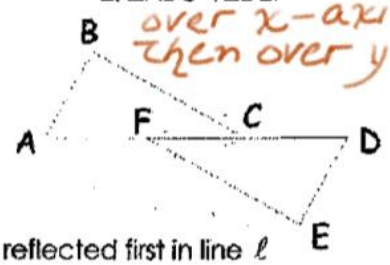
Name: _____ Date: _____

Name the transformation that maps:

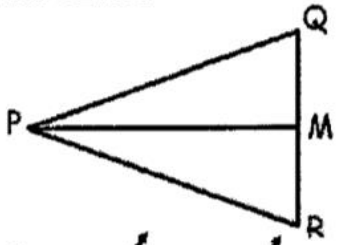
1. ΔABC→ΔCDE Translation ↓ 1 unit Down



2. ΔABC→ΔDEF Reflect over x-axis then over y-axis

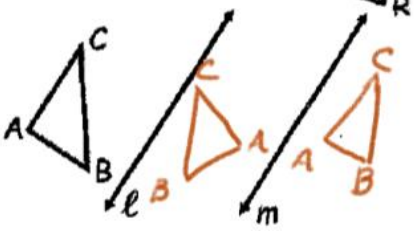


3. ΔPMR→ΔPMQ Reflect over x-axis



4. In the diagram, $\ell \parallel m$ 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?

Translate 2 units right



Describe any **rotations** (of 180° or less) that will map each figure onto itself.

5. 180 60° 120° 180°

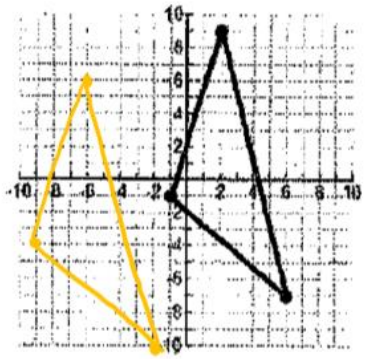
6. 72 144° 72°

7. 90° 180°

8. 120°

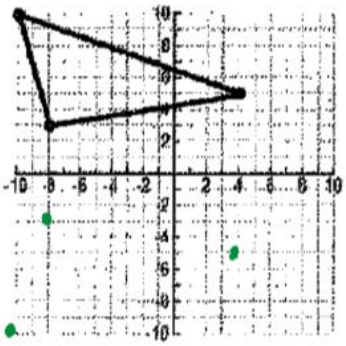
Draw the image of each figure, using the given transformation.

9. Translation (x, y) → **(x – 8, y – 3)**



2, 9
-2, -1
6, -7

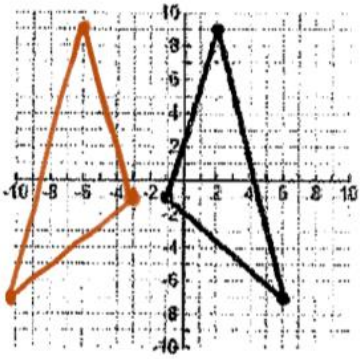
10. Reflection across the **x-axis.**



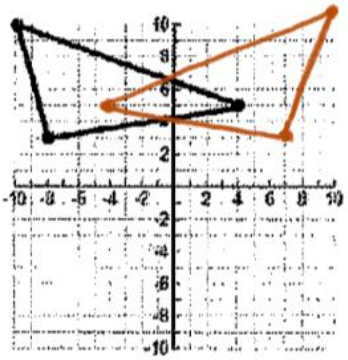
-10, 10
4, 5
8, 3
-10, -10
4, -5
8, -5

11. Reflection across the line **x = -2**

-6, 9
-3, -1
-10, -7

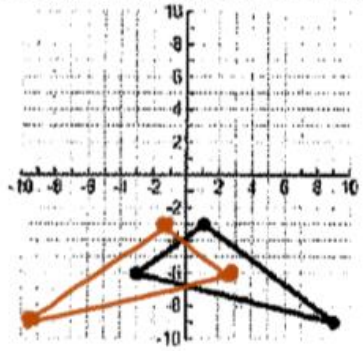


12. Reflection across the **y-axis.**



(-x, -y)

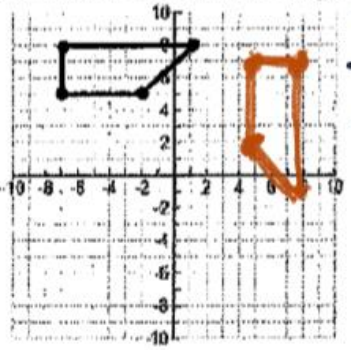
13. Rotation **180°** about the origin



1, -3 →

(y, -x)

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



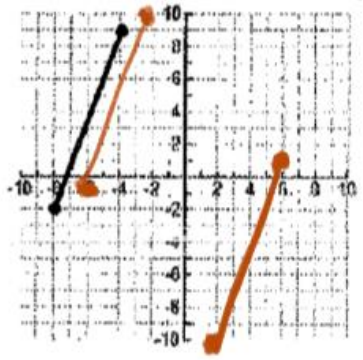
(1, 8) → 8, -1

-2, 5 → 5, 2

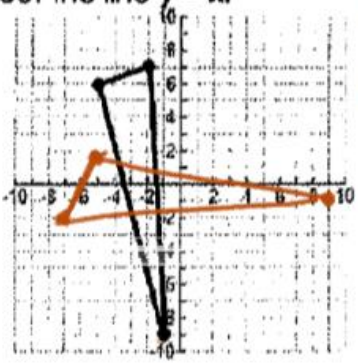
-7, 5 → 5, 7

-7, 8 → 8, 7

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.**



(-5, 2)

(-7, -2)

(9, -1)