Geometry
Review for Transformation Test

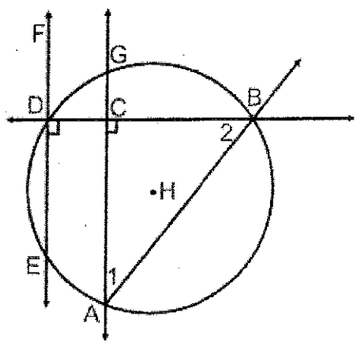
Name: _____
Date: _____ Period: _____

Write the correct vocabulary word next to the definition.

1. _____ - an exact position or location in a given plane
2. _____ - part of a line bounded by two distinct endpoints
3. _____ - formed where two lines or rays share an endpoint
4. _____ - two coplanar lines that have unique points and never cross
5. _____ - a portion of a line that starts at a point and continues to infinity
6. _____ - the set of points on a plane at a certain distance, or radius from a single point, the center
7. _____ - creates four right angles

Find each geometry term in the diagram. Label using correct notation.

8. Ray: _____
9. Circle: _____
10. Line: _____
11. Line Segment: _____
12. <1: _____
13. Parallel Lines: _____
14. <2: _____
15. Perpendicular Lines: _____



16. Use the translation (x, y) → (x + 1, y - 7) for questions a – d.

a. What is the translation vector? _____

b. What is the image of A (10, -4)? _____

c. What is the image of A' from part b (which would be called A")? _____

d. What is the pre-image of C' (-9, 12)? _____

17. What is an isometry? _____

18. The vertices of ΔABC are A(-1. 0), B(5, 3), and C(2, -4). Find the vertices of ΔA'B'C' given the transformation rules below. Then describe the transformation that occurred.

a. (x, y) → (x + 11, y – 5) A' = _____ , B' = _____ , C' = _____

Transformation: _____

b. (x, y) → (-x, -y) A' = _____ , B' = _____ , C' = _____

Transformation: _____

c. (x, y) → (y, -x) A' = _____ , B' = _____ , C' = _____

Transformation: _____

d. (x, y) → (y, x) A' = _____ , B' = _____ , C' = _____

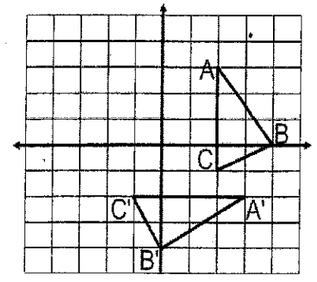
Transformation: _____

e. (x, y) → (-y, x) A' = _____ , B' = _____ , C' = _____

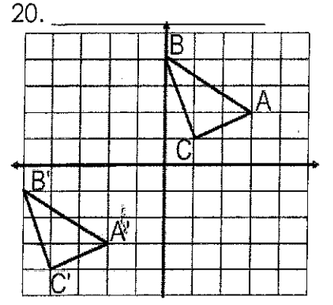
Transformation: _____

Write the transformation rule for the following graphs.

19. _____

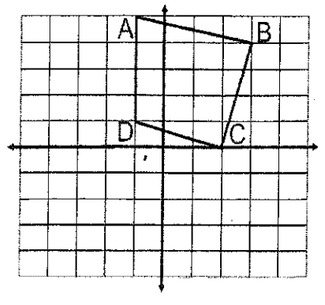


20. _____

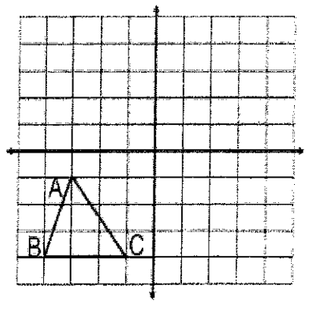


Follow the instructions for each graph.

21. Reflection across y = -x.



22. R_{90} (counterclockwise)



Geometry
Review for Transformation Test

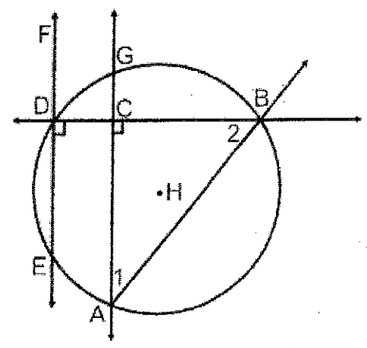
Name: Key
Date: _____ Period: _____

Write the correct vocabulary word next to the definition.

1. point - an exact position or location in a given plane
2. Segment - part of a line bounded by two distinct endpoints
3. Angle - formed where two lines or rays share an endpoint
4. parallel - two coplanar lines that have unique points and never cross
5. Ray - a portion of a line that starts at a point and continues to infinity
6. Circle - the set of points on a plane at a certain distance, or radius from a single point, the center
7. perpendicular - creates four right angles

Find each geometry term in the diagram. Label using correct notation.

8. Ray: $\overrightarrow{DE}$
9. Circle: $\odot H$
10. Line: $\overleftrightarrow{EF}$
11. Line Segment: $\overline{CB}$
12. <1: $\angle CAB$
13. Parallel Lines: $\overleftrightarrow{EF} \parallel \overleftrightarrow{CA}$
14. <2: $\angle ABC$
15. Perpendicular Lines: $\overleftrightarrow{EF} \perp \overleftrightarrow{DB}$



16. Use the translation (x, y) → (x + 1, y − 7) for questions a – d.

a. What is the translation vector? $\langle 1, -7 \rangle$

b. What is the image of A (10, -4)? A'(11, -11)

c. What is the image of A' from part b (which would be called A")? A"(12, -18)

d. What is the pre-image of C' (-9, 12)? C(-10, 19)

17. What is an isometry? (rigid) preserves all characteristics and properties

18. The vertices of ΔABC are A(-1. 0), B(5, 3), and C(2, - find the vertices of ΔA'B'C' given the transformation rules below. Then describe the transf ation that occurred.

a. (x, y) → (x + 11, y – 5) A' = (10, -5) B' = (16, -2) C' = (13, -9)

Transformation: translation

b. (x, y) → (-x, -y) A' = (1, 0) , B' = (-5, -3) , C' = (-2, 4)

Transformation: 180° Rotation

c. (x, y) → (y, -x) A' = (0, 1) , B' = (-4, -2) , C' = (3, -5)

Transformation: 90° CW Rot.

d. (x, y) → (y, x) A' = (0, -1) , B' = (3, 5) , C' = (-4, 2)

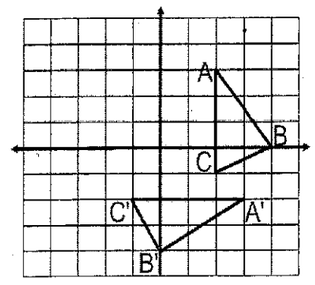
Transformation: reflect y=x

e. (x, y) → (-y, x) A' = (0, -1) , B' = (-3, 5) , C' = (4, 2)

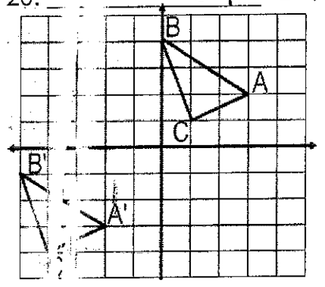
Transformation: 90° CCW Rot.

Write the transformation rule for the following graphs.

19. 90° CW

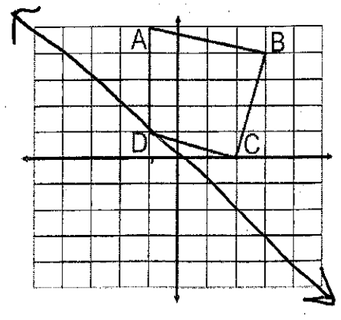


20. <-5, -5>



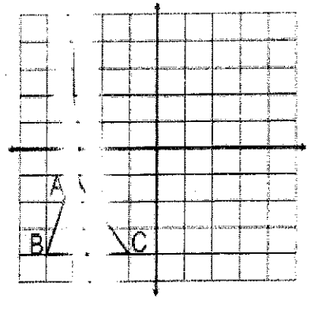
Follow the instructions for each graph.

21. Reflection across y = -x.



A'(-5, 1)
B'(-4, -3)
C'(0, -2)
D'(-1, 1)

22. 1 (counterclockwise)



A'(1, -3)
B'(4, -4)
C'(4, -1)

2