

Name: _____
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Class: _____

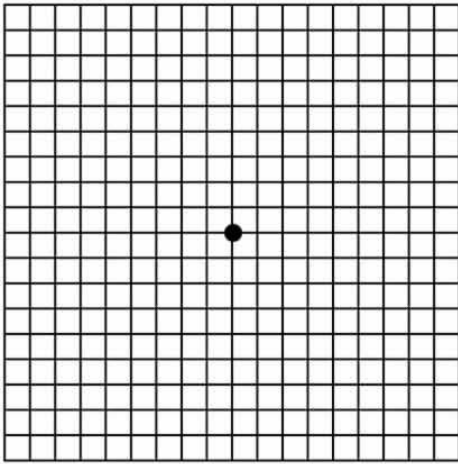
Geometry
Unit 5
PS

1) [2] What translation maps (2, 4) to (6, 12)?

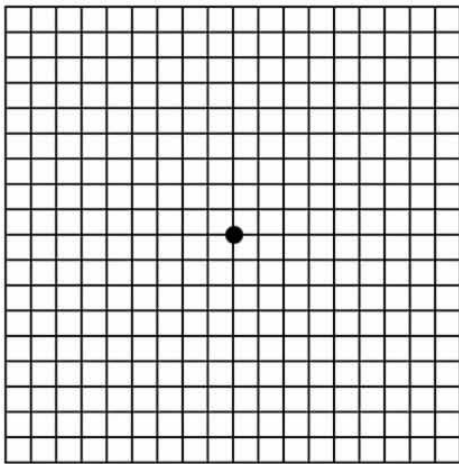
2) [2] What dilation maps (-2, -1) to (-8, -4)?

3) [2] What rotation maps (-2, -4) to (2, 4)

4) [3] Reflect \overline{PQ} through the point (2, -3) if P(-2, 3) and Q(-4, 0).



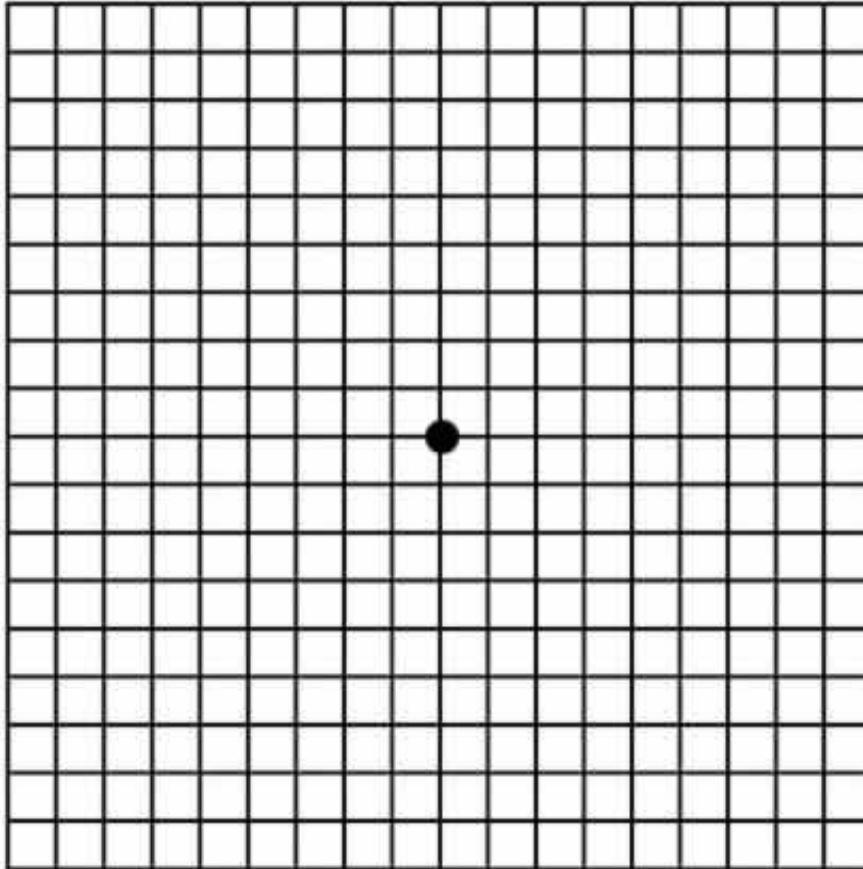
5) [3] Perform: $R_{270^\circ}(\overline{SV})$ if S(-4, -5) and V(-8, -1).



6) [3] If a dilation maps (-1, 3) to (-4, 12) Find the image of $\triangle ABC$ if A(0, 2), B(4, 7), and C (10,0).

7) [4] Using A(2, 3), B(4, 7), and C(8, 1) perform:

$$r_{y=x} \circ D_{\frac{1}{2}} \circ T_{-3,-5}$$



8) [3] Find the image of triangle XWP after $T_{-1,3} \circ r_{y=x}$ if X (2,4), Y (6, 6), and P (4,-2)

9) [3]

The vertices of $\triangle JKL$ have coordinates $J(5,1)$, $K(-2,-3)$, and $L(-4,1)$. Under which transformation is the image $\triangle J'K'L'$ *not* congruent to $\triangle JKL$? (List 2 examples of transformations that would result in non-congruent images).

10) [4] If $\triangle ABC$ is dilated by a scale factor of 3, which statement is true of the image $\triangle A'B'C'$? (State why each wrong answer is wrong)

(1) $3A'B' = AB$

(3) $m\angle A' = 3(m\angle A)$

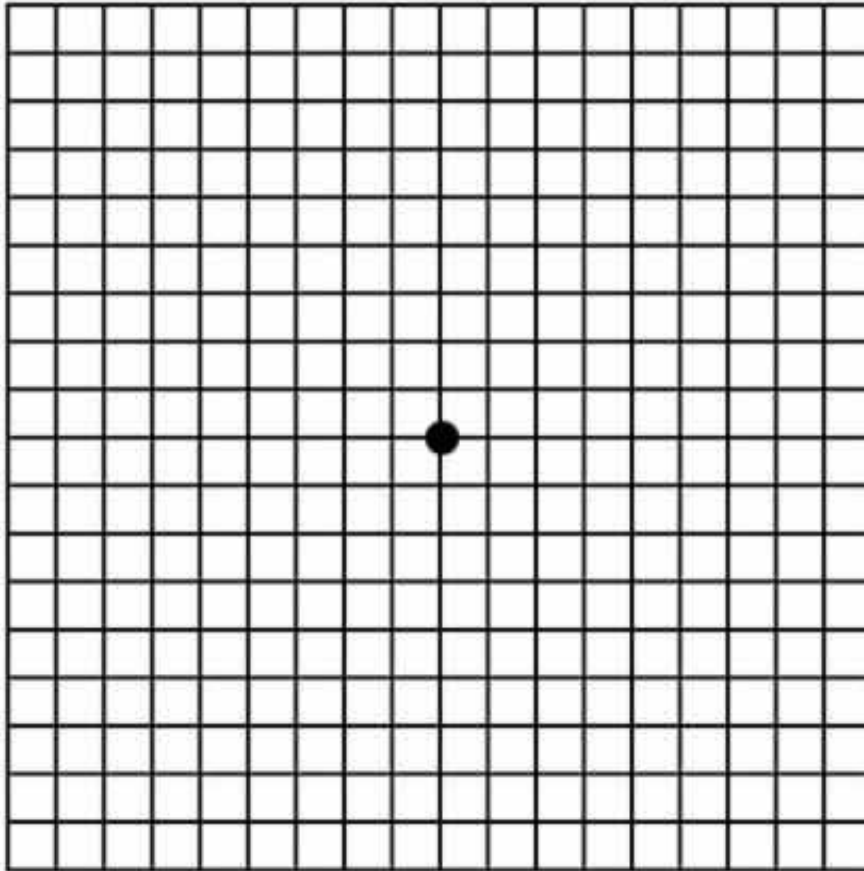
(2) $B'C' = 3BC$

(4) $3(m\angle C') = m\angle C$

11) [4] Using $X(-2, -1)$, $Y(-3, -6)$, $Z(-6, -5)$ and $A(-4, 0)$:
Graph $X'Y'Z'A'$ which is the image of $XYZA$ after R_{270° clockwise

Graph $X''Y''Z''A''$ which is the image of $X'Y'Z'A'$ after $T_{(1,2)}$

Graph $X'''Y'''Z'''A'''$ which is the image of $X''Y''Z''A''$ after $R_{y=-x}$

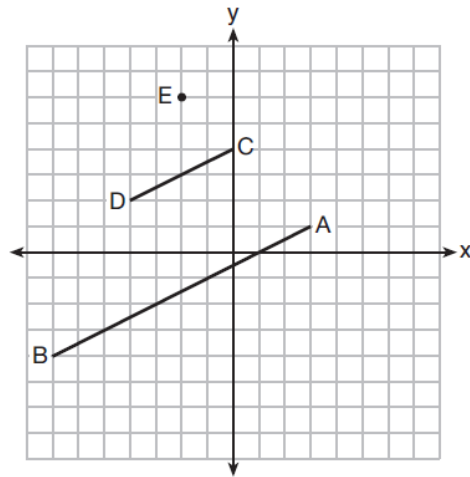


12) [4] Using a dilation centered at $(1,2)$ and $SF = 1:3$, find the image of triangle XQD with $X(3, 4)$, $Q(6, 3)$, and $D(5, 7)$.

13) [3]

After a reflection over a line, $\triangle A'B'C'$ is the image of $\triangle ABC$. Explain why triangle ABC is congruent to triangle $A'B'C'$.

- 14) [3] In the diagram below, \overline{CD} is the image of \overline{AB} after a dilation of scale factor k with center E .



Which ratio is equal to the scale factor k of the dilation?

- 15) [4] If the image of point A is $(10, 8)$ under a dilation centered at $(2, 2)$ with scale factor $1:4$ what are the coordinates of point A.

- 16) [4] If a triangle has area 27cm^2 , and you perform the following composition of transformations what would the resulting area be? $R_{90^\circ} \circ r_{y=x} \circ D_2 \circ T_{4,7}$