Date _____ Geometry CC

Unit 2-7 Review: Dilations

1) Which of the following is a stretch?

A) $T(x,y) \text{----->} (-x,-y)$ B) $T(x,y) \text{----->} (x+7,y-5)$

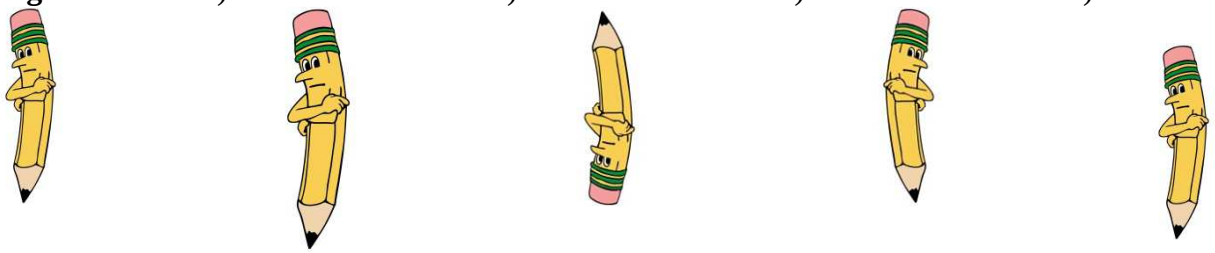
C) $T(x,y) \text{----->} (2x,2y)$ D) $T(x,y) \text{----->} (1x,4y)$

2) Which of the following is not a rigid motion?

A) Stretch B) Translation C) Rotation D) Reflection

3) Given the original figure, which of the following is a dilation?

Original A) B) C) D)

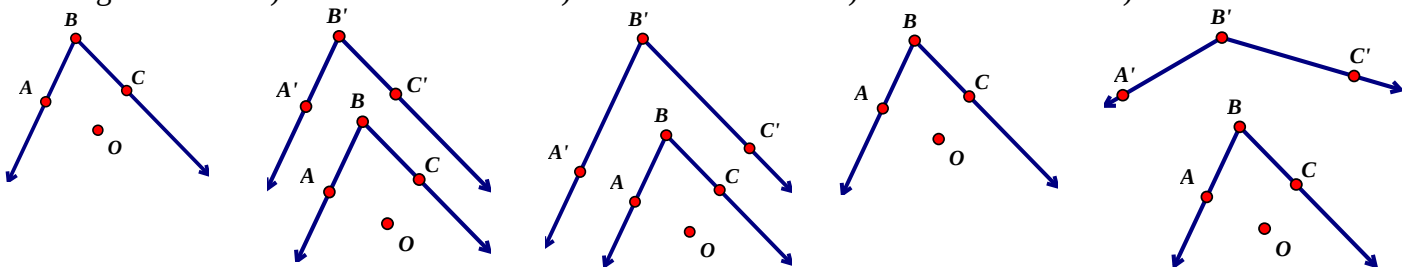


4) Which of the following ratios of pre-image : image represents an enlargement?

A) 1 : 1.00002 B) 5 : 4 C) 0.5 : 0.088 D) 7 : 6.5

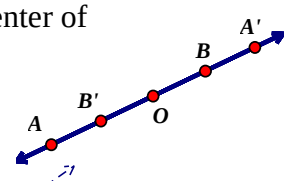
5) If we $D_{O,2}$ then the correct diagram would be:

Original A) B) C) D)

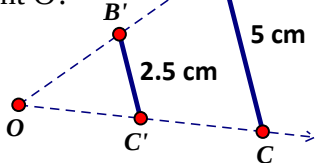


6) Determine the scale factor that best suits the provided diagram (O is the center of dilation).

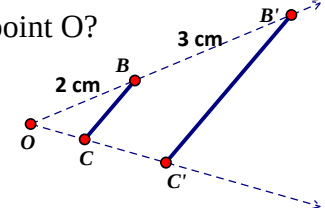
A) 2 B) $\frac{1}{2}$ C) $\frac{1}{3}$ D) – 1



7) Determine the scale factor of the given dilation from point O?



8) Determine the scale factor of the given dilation from point O?



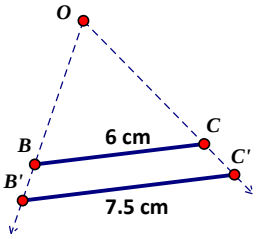
9) Given $D_{O,-4}P(x,y)=P'(4,8)$ then P(x,y) is

A) P(-1,-2) B) P(4,-32) C) P(4,4) D) P(-16,-32)

10) Determine whether the dilation is an enlargement or a reduction.
Determine the ratio of pre-image to image in the most reduced form (no decimals).
Determine the scale factor, k.

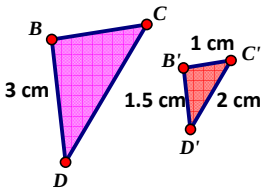
a) Enlarge or Reduce _____ : _____

k = _____



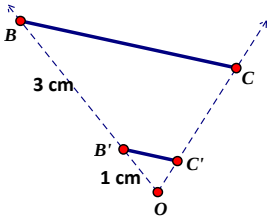
b) Enlarge or Reduce _____ : _____

k = _____



c) Enlarge or Reduce _____ : _____

k = _____

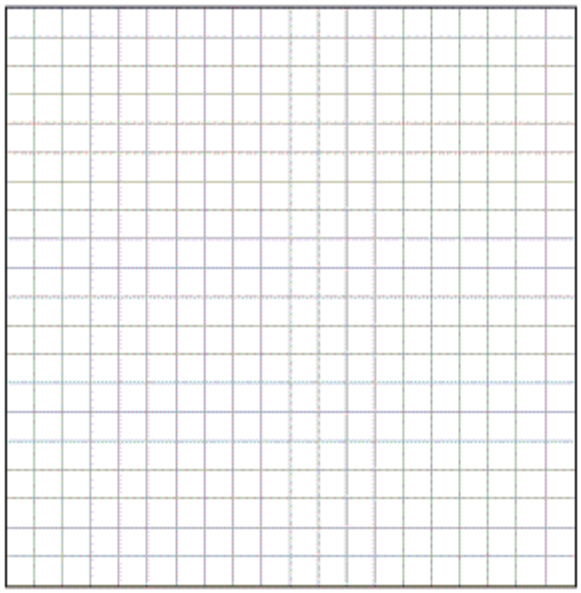


11) Determine the point.

a) $D_{H,4}(B)=$(_____) b) $D_{C,\frac{1}{2}}($_____$)=(F)$ c) $D_{H,-2}(G)=$(_____)

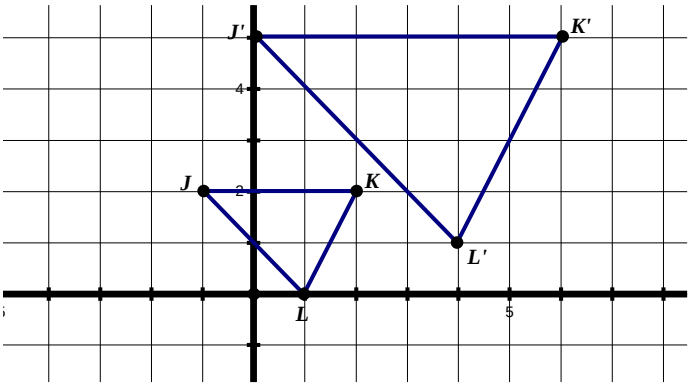
d) $D_{H,-\frac{1}{3}}(E)=$(_____) e) $D_{D,\frac{3}{2}}(G)=$(_____)

12) The coordinates of the vertices of ΔABC $A(1,3)$, $B(-2,2)$ and $C(0,-2)$. On the grid below, graph and label $\Delta A''B''C''$, the result of the composite transformation $D_2 \circ T_{3,-2}$. State the coordinates of A'', B'', and C''. The center of the dilation is the origin

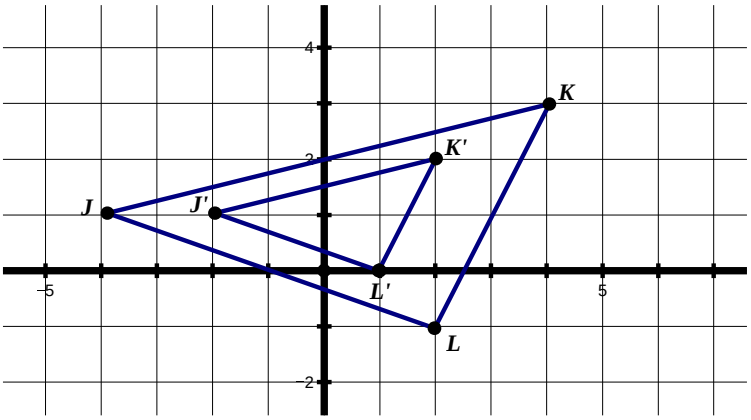


13) Work backwards to find the center of dilation, and also determine the scale factor.

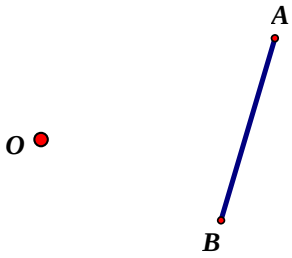
Center (_____ , _____)
Scale Factor = _____



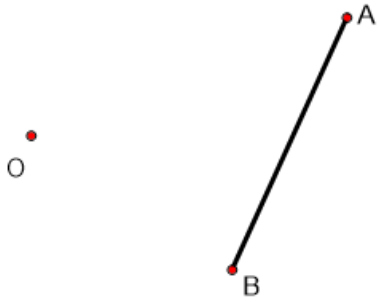
Center (_____ , _____)
Scale Factor = _____



14)
Use a compass and a straightedge to construct
$D_{O,2}\left(\overline{AB}\right)$



15) Use a compass and a straightedge to construct
$D_{O,\frac{1}{2}}(AB)$



16. What would be the equation of the line $2x + y = 6$ after a dilation of 3 centered about the origin?

17. What is the equation of $y = \frac{2}{3}x - 2$ after D_3 with respect to the point (-3, 1)? USE GRAPH PAPER

18. What is the equation of $y = 3x - 4$ after $D_{1/2}$ with respect to the point (2, 2)? USE GRAPH PAPER

19. A three-inch line segment is dilated by a scale factor of 6 and centered at its midpoint. What is the length of its image?

1 9 inches
2 2 inches
3 15 inches
4 18 inches