1) Which of the following is a stretch?

A) $T(x,y) ---->(-x,-y)$
C) $T(x,y) ---->(2x,2y)$

B) $T(x,y) ---->(x+7,y-5)$
(D) $T(x,y) ---->(1x,4y)$ *multiply by different #*

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 $\frac{image}{pre-image} > 1$

5) If we $D_{O,2}$ then the correct diagram would be:
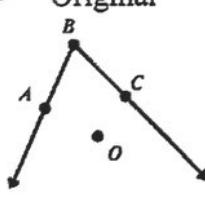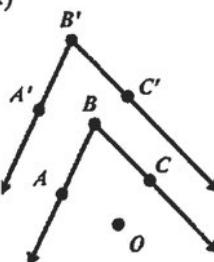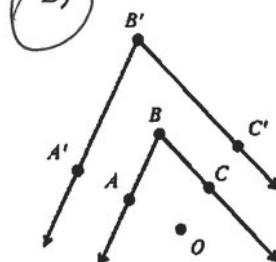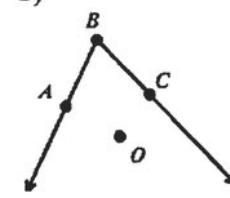
Original   A)   (B)   C)   D)
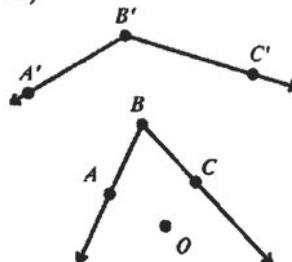
points are collinear

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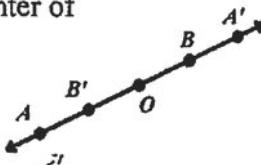
7) Determine the scale factor of the given dilation from point O?

$K = \dfrac{image}{preimage} = \dfrac{2.5}{5} = \boxed{\dfrac{1}{2}}$
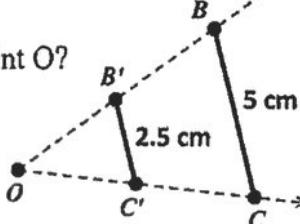
8) Determine the scale factor of the given dilation from point O?

$K = \dfrac{image}{pre-image} = \boxed{\dfrac{5}{2} \text{ or } 2.5}$

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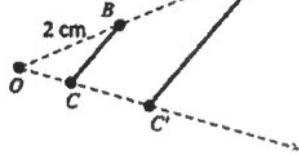
*Divide by scale factor

9) Given $D_{0,-4}P(x,y)=P'(4,8)$ 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   b) Enlarge or Reduce   c) Enlarge or Reduce

  $\dfrac{6}{4} : \dfrac{7.5}{5}$

  simplest 4 : 5
  form: k = 1.25

  $\dfrac{3}{2} : \dfrac{1.5}{1}$

  $k = \dfrac{1}{2}$ or .5

  $\dfrac{4}{1} : \dfrac{1}{1}$

  $k = \dfrac{1}{4}$ or .25
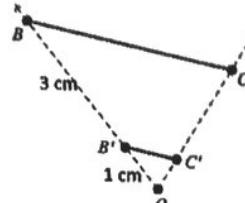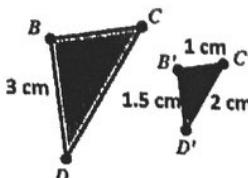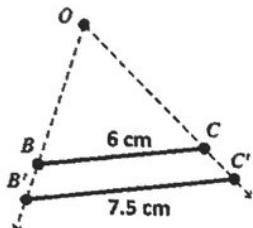
11) Determine the point.

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

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

12) The coordinates of the vertices of $\triangle ABC$ A(1,3), B(-2,2) and C(0,-2). On the grid below, graph and label
$\triangle A''B''C''$, 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

$A(1,3) \longrightarrow A'(4,1)$
$B(-2,2) \Rightarrow B'(1,0)$
$C(0,-2) \rightarrow C'(3,-4)$


$\rightarrow A''(8, 2)$
$\rightarrow B''(2,0)$
$\rightarrow C''(6,-8)$

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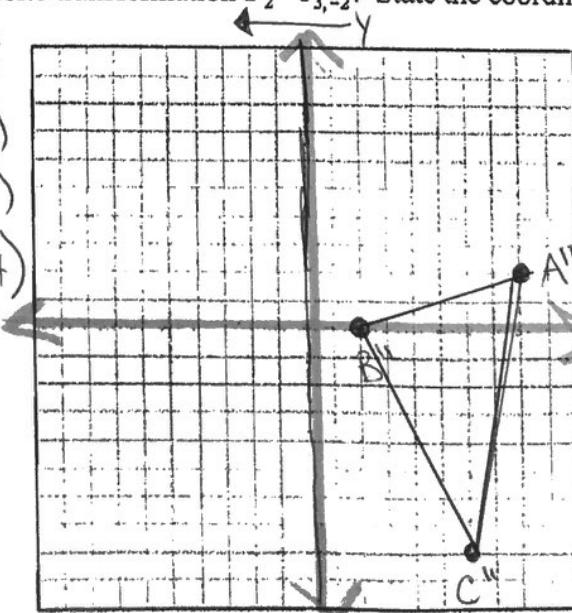
13) Work backwards to find the center of dilation, and also determine the scale factor.   * use slope

Center (-2 , -1)
Scale Factor = 2

Center (0 , 1)
Scale Factor = $\frac{1}{2}$
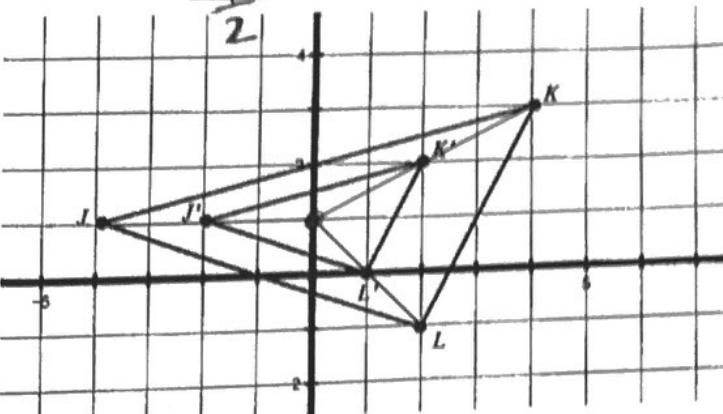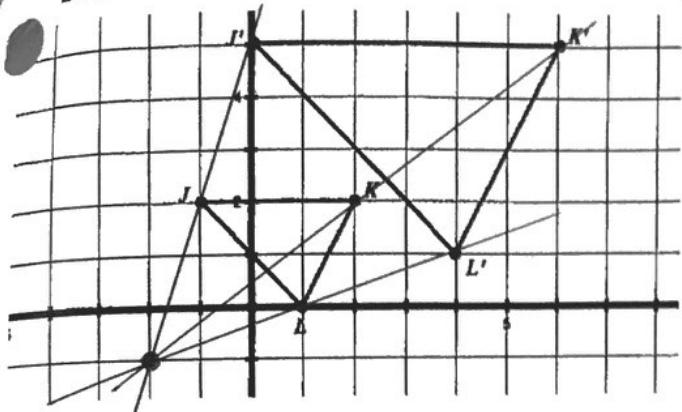
14)
Use a compass and a straightedge to construct

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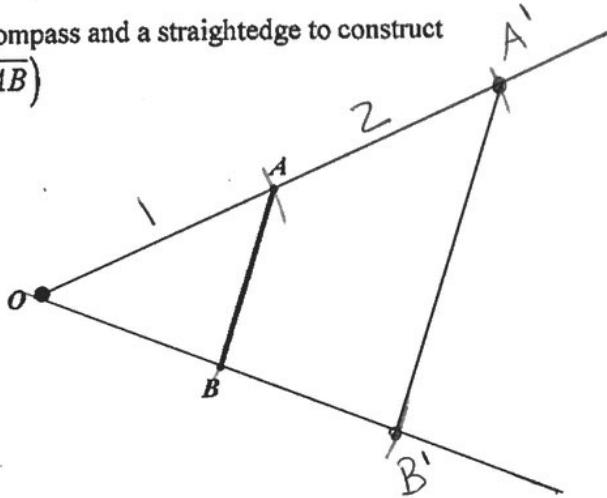
15) Use a compass and a straightedge to construct

$D_{O,\frac{1}{2}}(AB)$
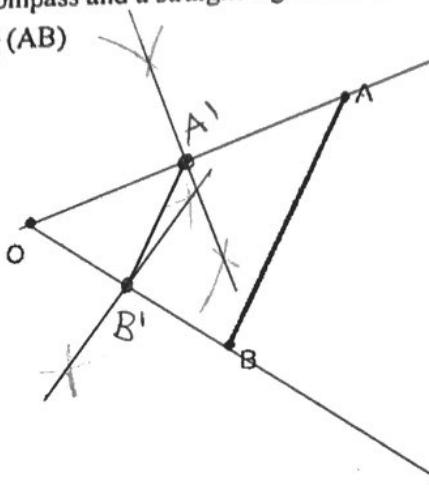
16. What would be the equation of the line $2x + y = 6$ after a dilation of 3 centered about the origin?

$y = -2x + 6$

y-int: (0,6)

$\boxed{y = -2x + 18}$

y-int: (0,18)

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

$y = \frac{2}{3}x - 12$

* plog point in 15+

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

$y = 3(2) - 4$
$y = 2$

$\boxed{y = 3x - 4}$

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

$3 \times 6 = 18$

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