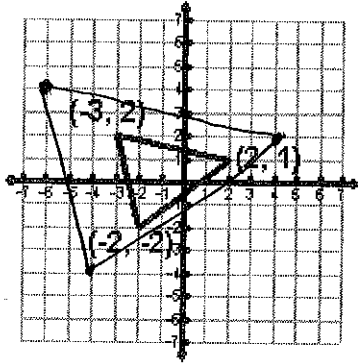


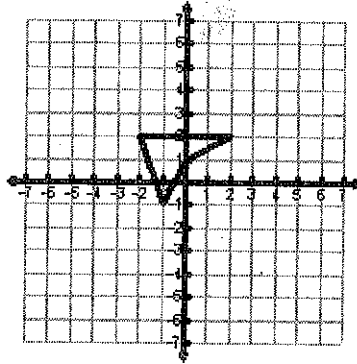
* multiply x & y by $S.F.$ to get new points

Dilate the following with the given scale factors.

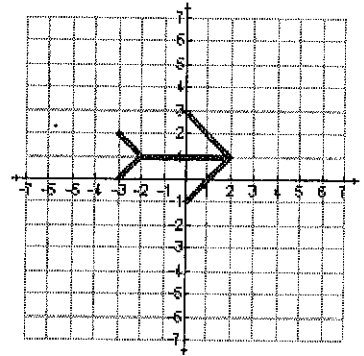
1) scale factor = 2



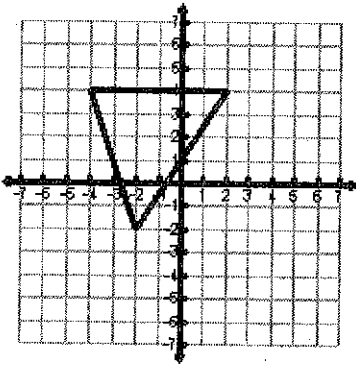
2) scale factor = 3



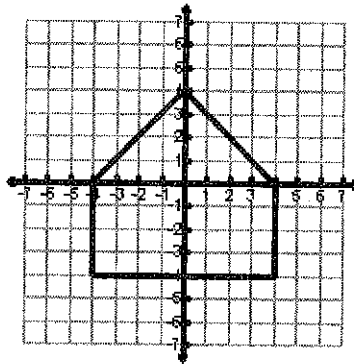
3) scale factor = 2



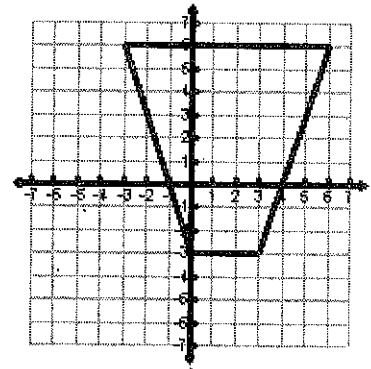
4) scale factor = $\frac{3}{4}$.75



5) scale factor = $\frac{3}{2}$ = 1.5

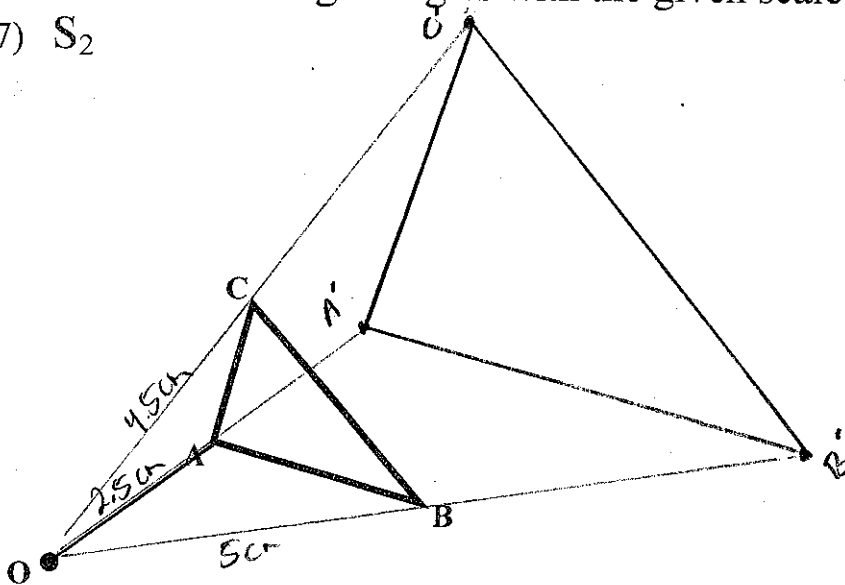


6) scale factor = $\frac{2}{3}$



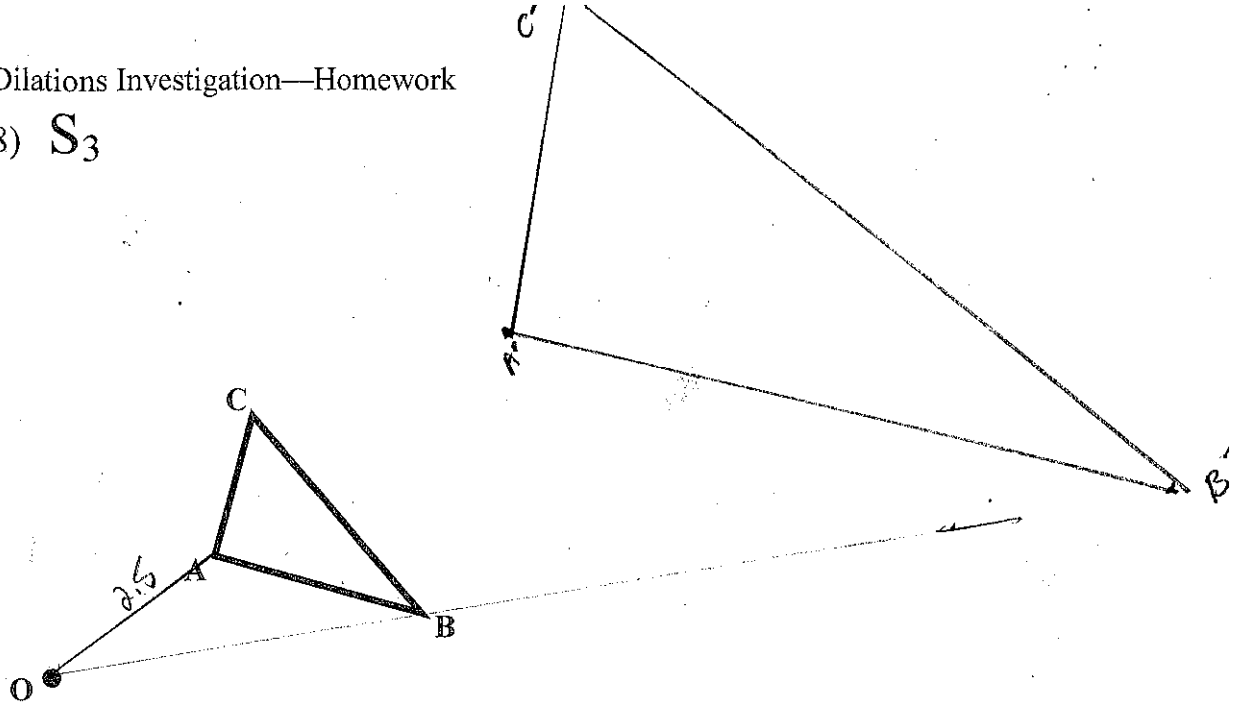
Dilate the following triangles with the given scale factors.

7) S_2

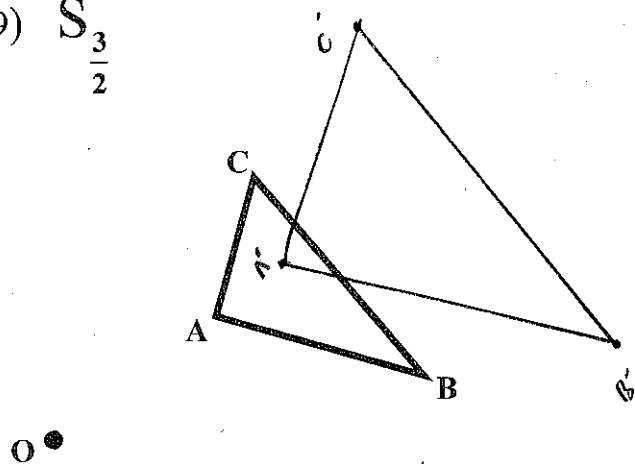


Dilations Investigation—Homework

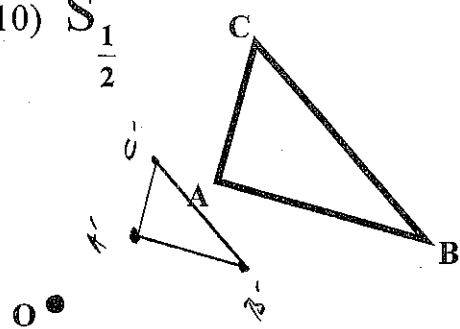
8) S_3



9) $S_{\frac{3}{2}}$



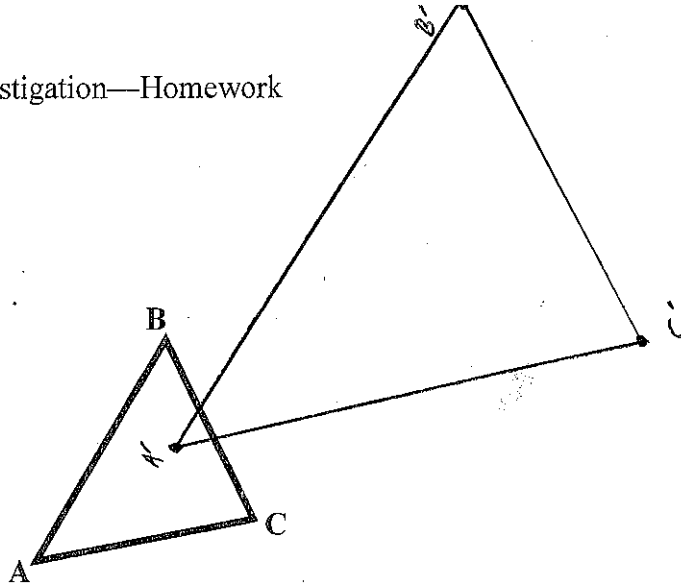
10) $S_{\frac{1}{2}}$



8

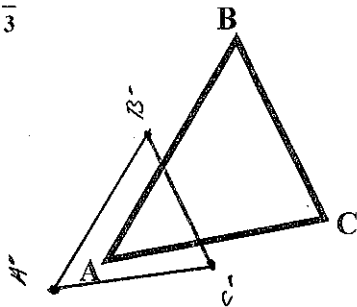
Dilations Investigation—Homework

11) S_2



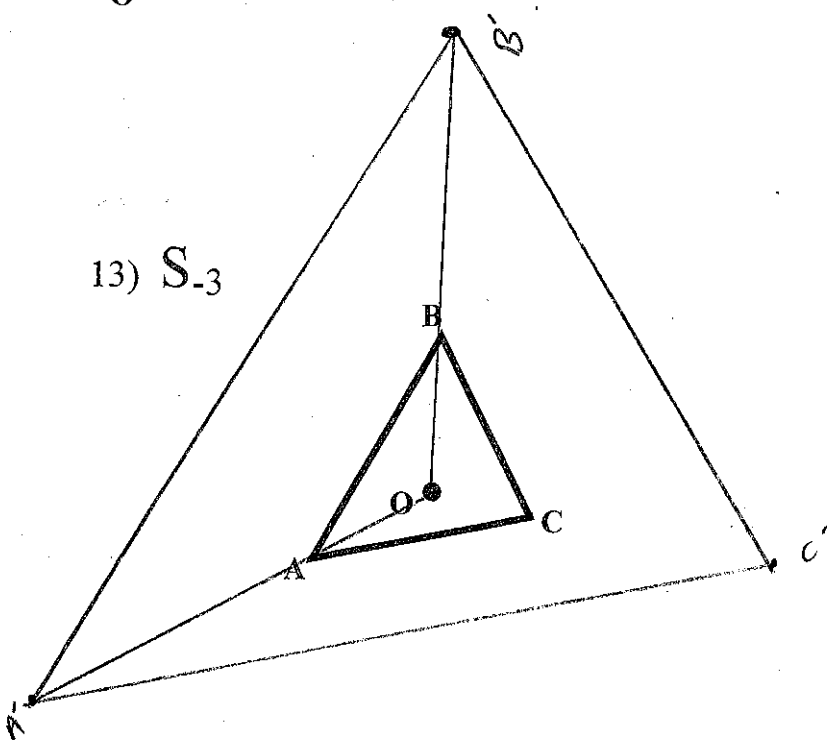
O ●

12) $S_{\frac{2}{3}}$



O ●

13) S_{-3}



Dilations Investigation—Homework

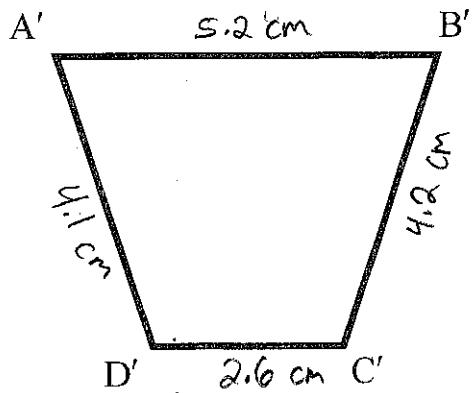
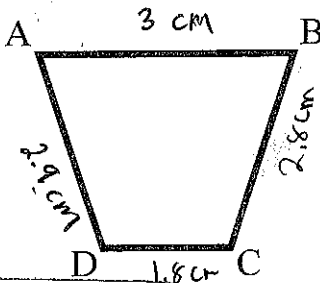
14) Use a ruler to find the scale factor of the following dilation. _____

$$3x = 5.2 \quad x = 1.73$$

$$2.9x = 4.1 \quad x = 1.41$$

$$1.8x = 2.6 \quad x = 1.44$$

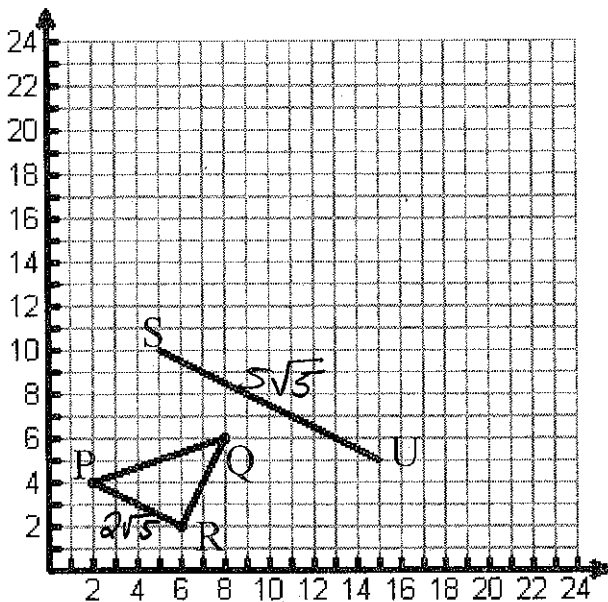
$$2.8x = 4.2 \quad x = 1.5$$



Dilation of about 1.42

- a) How does the dilation change the angles measures? Does not change angles
- b) How does the dilation change the length of the sides? Increase by S.F of 1.42
- c) How does the dilation change the perimeter? perimeter will increase by a factor of 1.42
- d) How does the dilation change the area? $(1.42)^2 \approx 2.01$ times the area

15) The graph shows $\triangle PQR$ with vertices $P(2, 4)$, $Q(8, 6)$, and $R(6, 2)$ and \overline{SU} with endpoints $S(5, 10)$ and $U(15, 5)$.



Distance of \overline{PR}
 $P(2, 4) \quad R(6, 2)$
 $d = \sqrt{(6-2)^2 + (4-2)^2}$
 $= \sqrt{16 + 4}$
 $= \sqrt{20}$
 $= 2\sqrt{5}$

\overline{SU}
 $d = \sqrt{(5-15)^2 + (10-5)^2}$
 $= \sqrt{100 + 25}$
 $= \sqrt{125}$
 $= 5\sqrt{5}$

At what coordinates would vertex T be placed to create $\triangle STU$, a triangle that is a dilation of $\triangle PQR$?

$$Q(8, 6) \times 2.5 = (20, 15)$$

- F (12, 9)
- G (16, 12)
- H (20, 15)**
- J (24, 18)