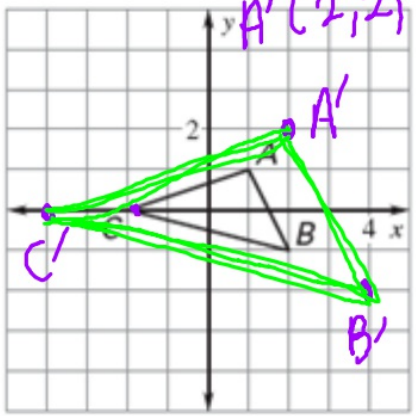
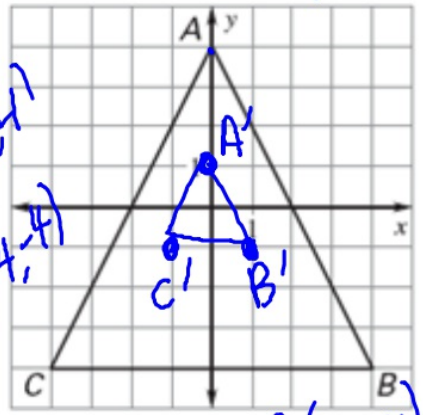
Draw a dilation of the figure using the given scale factor.

1. $k = 2$



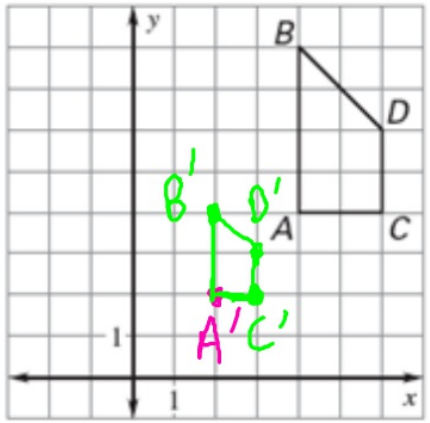
A(1,1)
A'(2,2)
SF
$\frac{-4}{-2} = 2$
C(-2,0)
C'(-4,0)
B(2,-1)
B'(4,-2)

2. $k = \frac{1}{4}$



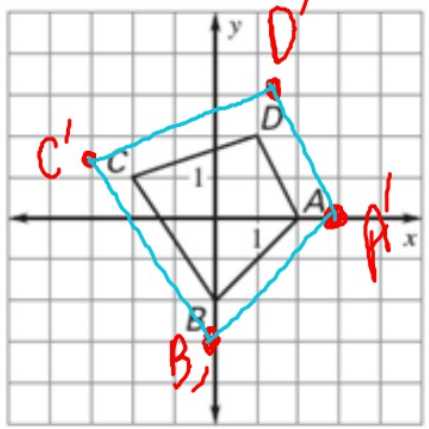
A(0,4)
A'(0,1)
C'(-1,1)
C(-4,4)
B(4,-4)
B(1,-1)

3. $k = \frac{1}{2}$



A(4,4)
A'(2,2)

4. $k = 1\frac{1}{2} = \frac{3}{2}$

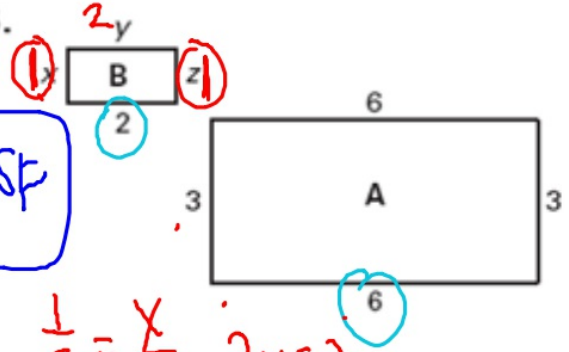


C(-2,1)
C'(-3,3/2)
A(2,0)
$2 \cdot \frac{3}{2} = 3$
A'(3,0)
B(0,-2)
B'(0,-3)

Determine whether the dilation from Figure A to Figure B is a *reduction* or an *enlargement*. Then, find the values of the variables.

Reduction

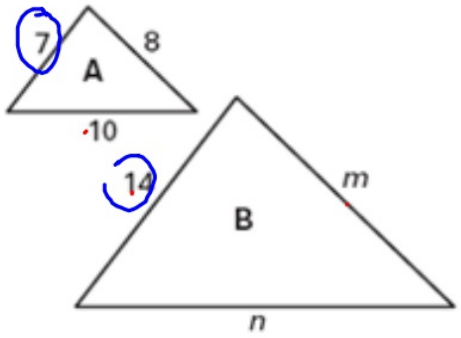
5.



$\frac{2}{6} = \frac{1}{3}$ SF

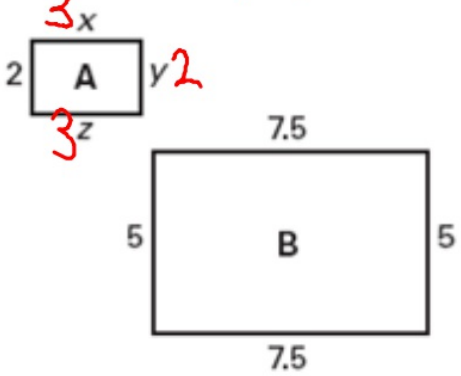
$\frac{1}{3} = \frac{x}{3}$ $3x = 3$ $x = 1$

6.



$\frac{14}{7} = \frac{SF}{2}$

7.

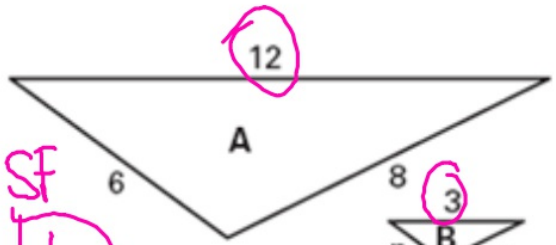


SF $\frac{5}{2}$

$\frac{5}{2} = \frac{7.5}{x}$

$5x = 15$ $x = 3$

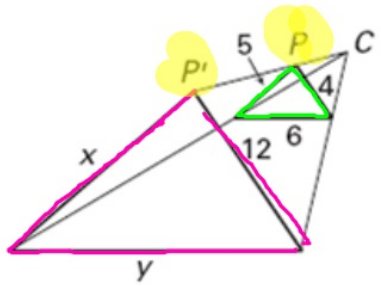
8.



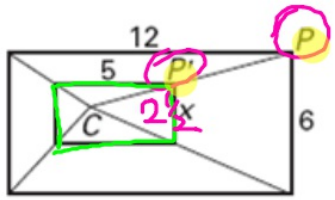
SF $\frac{3}{12} = \frac{1}{4}$

Find the scale factor. Tell whether the dilation is a *reduction* or an *enlargement*. Then find the values of the variables.

9



10



$\frac{5}{12} = \frac{x}{6}$ $x = \frac{30}{12} = \frac{5}{2} = 2\frac{1}{2}$

Determine if the following scale factor would create an enlargement, reduction, or isometric figure.

11. 3.5

12. 2/5

13. 0.6

14. 1 → isometric (no change)

15. 4/3

16. 5/8

Given the point and its image, determine the scale factor.

17. A(3,6) A'(4.5,9)

SF $\frac{9}{6} = \frac{3}{2} = 1\frac{1}{2}$

18. G'(3,6) G(1.5,3)

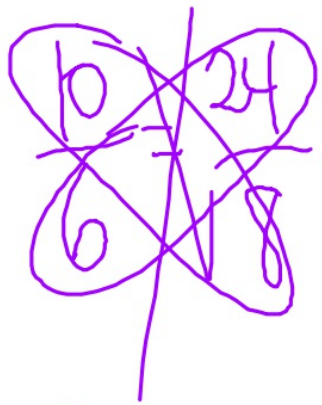
$\frac{6}{3} = 2$

19. B(2,5) B'(1,2.5)

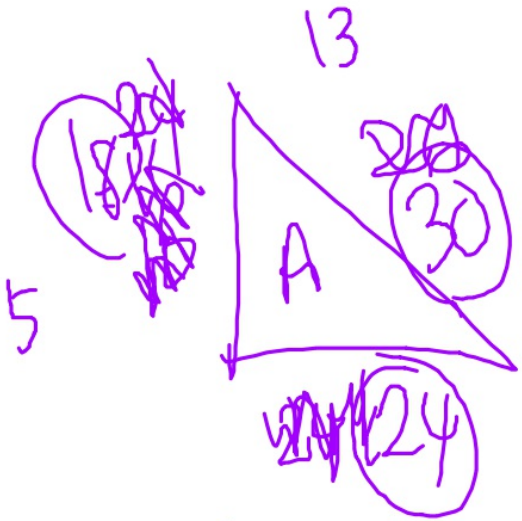
$\frac{1}{2}$

20. The sides of one right triangle are 6, 8, and 10. The sides of another right triangle are 10, 24, and 26. Determine if the triangles are similar. If so, what is the ratio of corresponding sides?

NO



$80 =$



$\frac{18}{6} = 3$

3:4:5