A dilation maps triangle WXY onto triangle W'Z'Y'.
Find the scale factor and the missing values.

WX = 50

XY = 30

YW = 20

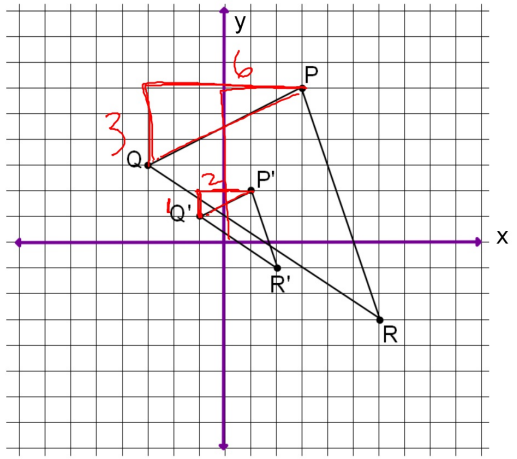
W'X' = 40

X'Y' = 24 $\quad \frac{4}{5} = \frac{X}{30}$

Y'W' = 16 $\quad \frac{4}{5} = \frac{16}{X}$

$SF = \frac{40}{50} = \frac{4}{5}$

A dilation of triangle PQR is shown below. The center of dilation is the origin. Find the scale factor.



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

ORIGIN → P

3

6

ORIGIN P'

1

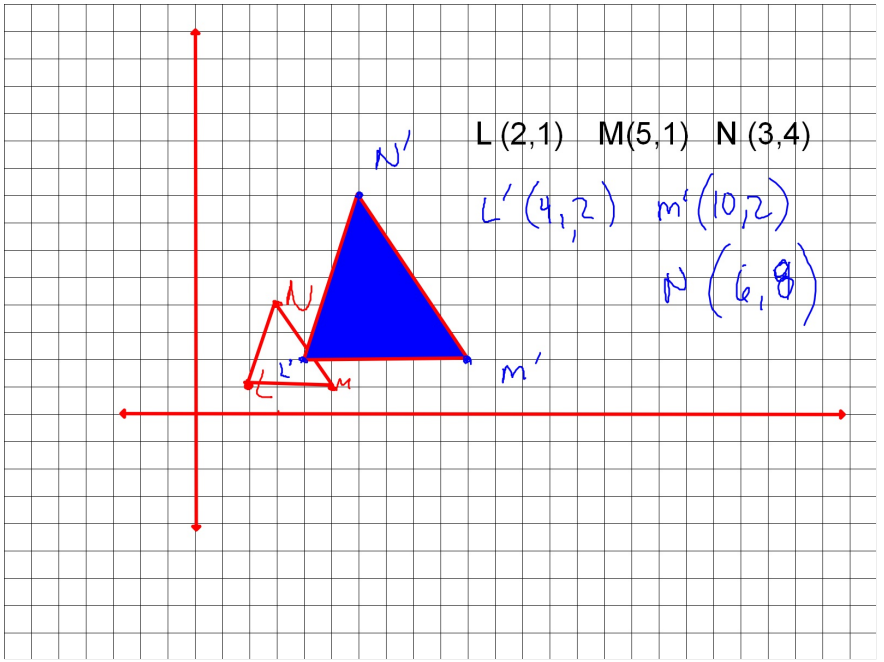
3

Dilations on graph paper:

Plot triangle LMN and dilate with a scale factor of 2:1. The center of dilation is the origin.

L (2,1) M(5,1) N (3,4)

See next page for results



A dilation has center (0,0). Find the coordinates of the image of each point for the given scale factor.

1. Point Q (4,5) scale factor = 4 $Q'(16,20)$

2. Point A (-3,7) scale factor = 7:2 $3.5:1$ A' (-10.5, 24.5)

$\frac{7}{2} = \frac{x}{-3}$ $\frac{7}{2} = \frac{x}{7}$

3. Point M (12,18) scale factor = 5:6 $M'(10,15)$

$\frac{5}{6} = \frac{x}{12}$ $\frac{5}{6} = \frac{y}{18}$

Dilate triangle EFG with center (-1,-3) with a scale factor of 2.

E(0,0) F(4,1) G(2,3)

See next page for the results.