

Find the missing measure in these dilations.

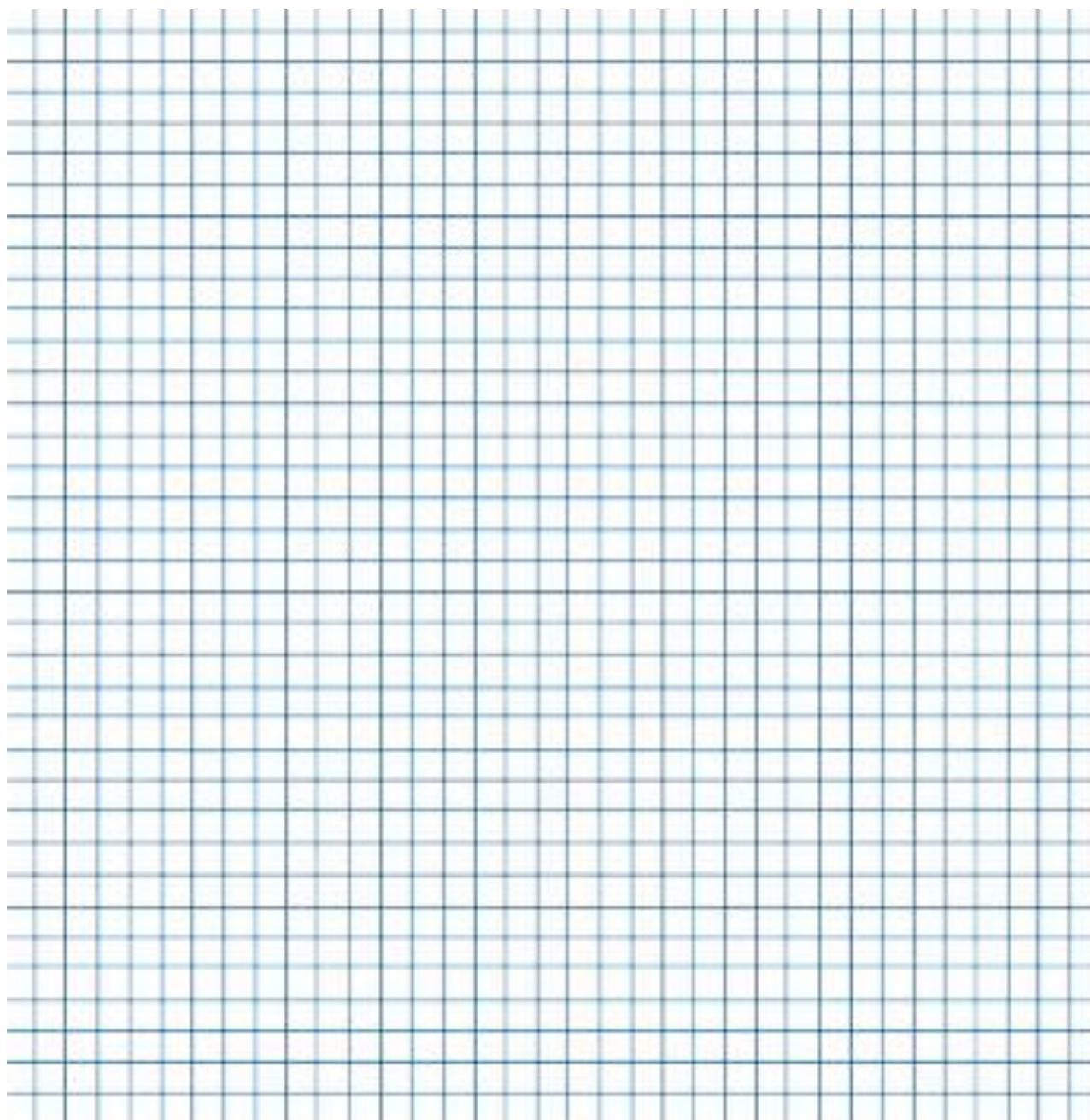
1) $ST = 6$
 $ST' =$
 $r = -1$

2) $AB = 8$
 $A'B' = 16$
 $r =$

3) $XY =$
 $XY' = 12$
 $r = 3$

4) $DR = 10$
 $D'R' =$
 $r = \frac{1}{2}$

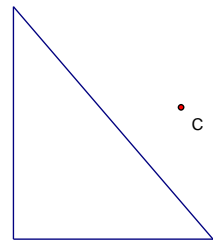
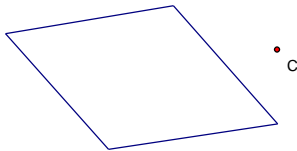
- 5) Graph the preimage. Then draw the dilation with a scale factor of 2 with center at origin.
Then draw the dilation with a scale factor of $\frac{1}{2}$ with center at origin. $F(3, 4)$ $G(6, 10)$ $H(-3, 5)$



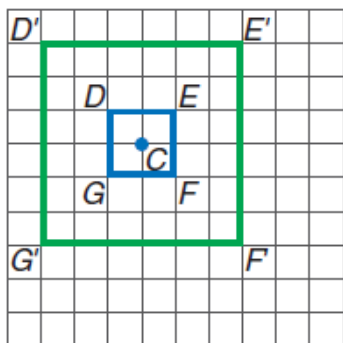
Draw these dilations.

6) $r = -2$

7) $r = 3$



8) Determine the scale factor.



9) Mike is building a model of the SR-71 Blackbird. If the wingspan of his model is 14 in, what is the scale factor of the model to the real aircraft?



The SR-71 Blackbird is 107 feet 5 inches long with a wingspan of 55 feet 7 inches and can fly at speeds over 2200 miles per hour. It can fly nonstop from Los Angeles to Washington, D.C., in just over an hour, while a standard commercial jet takes about five hours to complete the trip.

Source: NASA

Annalise is editing a digital photo that is 640 pixels wide and 480 pixels tall on her monitor.

10) If Annalise zooms the image on her monitor 150%, what are the dimensions (in pixels) of the image?

11) Suppose Annalise wants to use the photo on a webpage and she wants the image to be 32 pixels wide. What scale factor should she use?