

8.7 Dilations

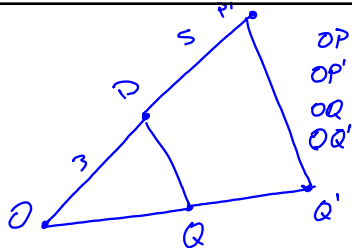
In chp 7 we talked about Rigid Transformations

A transformation that does not change in size

Dilation is a transformation where the image and the preimage are similar

↳ Angles \cong
Sides are proportional

Scale factor k

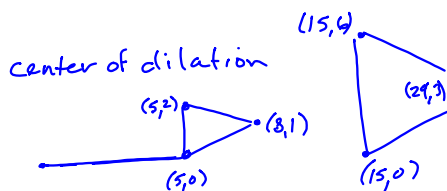


Scale Factor in Dilations
 $k = \frac{\text{image}}{\text{preimage}} = \frac{OP'}{OP} = 3$

Two types

If $k > 1$ Enlargement

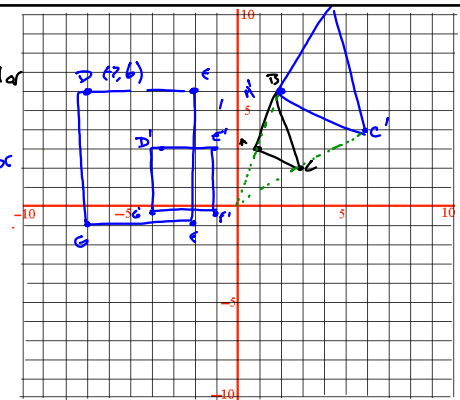
If $0 < k < 1$ Reduction

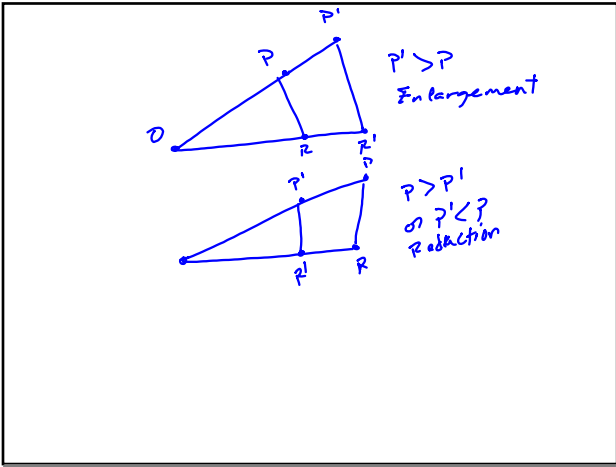


$k = 3$

$$P(x,y) = k(x,y) = (kx, ky)$$

$\triangle ABC'$ has a scale factor of 2
 $\triangle A'B'C'$ has a scale factor of $\frac{1}{2}$





P 509-511
2-30 even