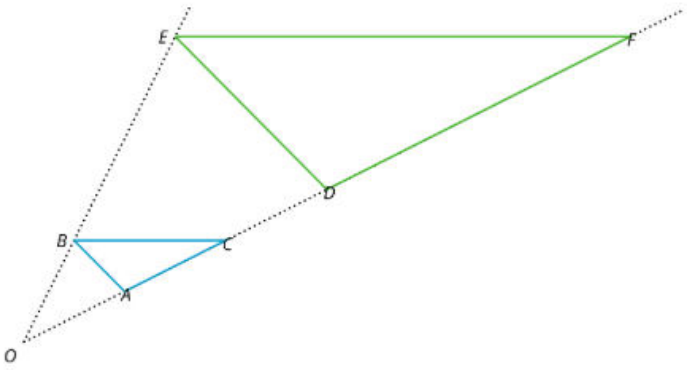
Unit 2 Glossary Terms

dilation

A dilation with center O and positive scale factor r takes a point P along the line OP to another point whose distance is r times further away from O than P is. If $r < 1$ then the new point is really closer to O, not further away.

The triangle DEF is a dilation of the triangle ABC with center O and with scale factor 3. So D is 3 times further away from O than A is, E is 3 times further away from O than B is, and F is 3 times further away from O than C is.

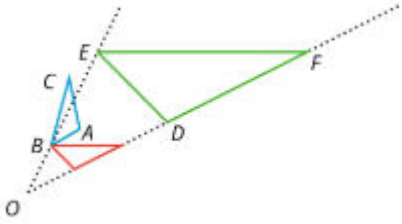


The equation $y = 6 - x$ defines y as a function of x. For each value of x, the input, the equation gives a value of y, the output.

similar

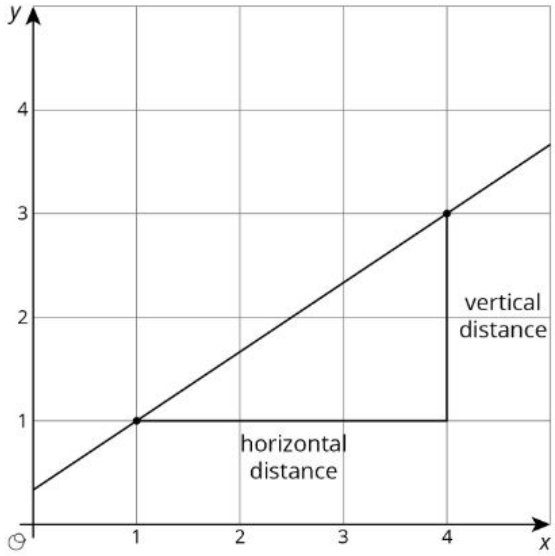
One figure is similar to another if there is a sequence of rigid transformations and dilations that moves the first figure so that it fits exactly over the second.

Triangle ABC is similar to triangle DEF because a rotation about B followed by a dilation with center O takes the first triangle to the second.



slope

The slope of a line is the quotient of the vertical distance and the horizontal distance between any two points on the line.



The slope of a line containing the points $(4, 3)$ and $(1, 1)$ is $\frac{2}{3}$, because the vertical distance between the points is $3 - 1 = 2$ and the horizontal distance is $4 - 1 = 3$.