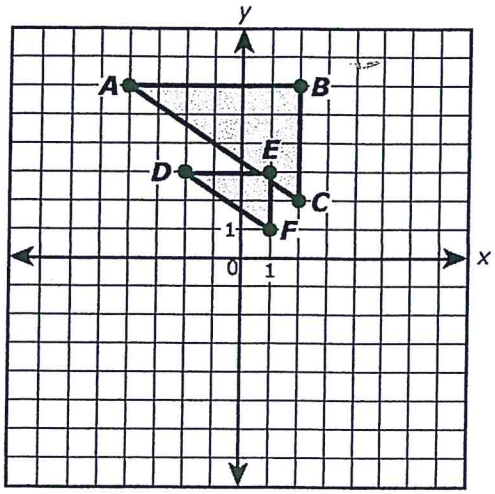
In the coordinate plane shown, $\triangle ABC$ has vertices $A(-4, 6)$, $B(2, 6)$, and $C(2, 2)$.



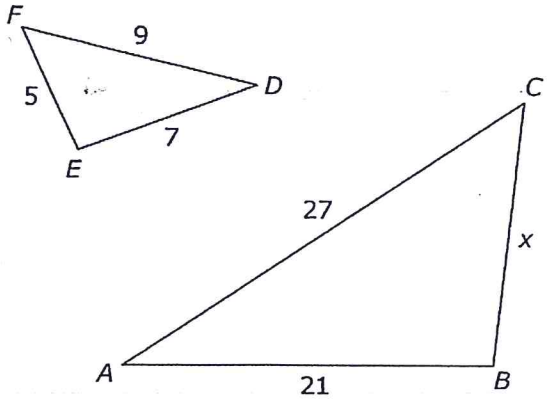
What is the scale factor and the center of dilation that will carry $\triangle ABC$ onto $\triangle DEF$?

Enter your answers in the boxes to complete the sentence.

The scale factor is [ ] and the center of dilation is at

([ ] , [ ]).

The figure shows $\triangle ABC \sim \triangle DEF$ with side lengths as indicated.



What is the value of x?

Enter your answer in the box.

[ ]

In the coordinate plane,

$\triangle ABC$ has vertices at $A\ (1, -2)$, $B\ (1, 0.5)$, $C\ (2, 1)$; and

$\triangle DEF$ has vertices at $D\ (4, -3)$, $E\ (4, 2)$, $F\ (6, 3)$.

Select from the drop-down menus to correctly complete the sentence.

The triangles are similar because $\triangle DEF$ is the image of $\triangle ABC$ under a dilation with center [Choose...] and scale factor [Choose...].