Scale factor is used to change the quantity of a set but keep the same ratio.
If Joe has 3 pairs of socks for each pair of shoes, and he has 21 pairs of socks, we can figure out how many pairs of shoes he has by using a scale factor. In this case, the scale factor would be 7 , because there are 7 groups of 3 in the total of 21 . Multiply 7 by the ratio of shoes (in this case 1 ), and there are 7 pairs of shoes.

$$
1 \text { pair of shoes ? pairs of shoes }
$$

