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 pair of shoes ? pairs of shoes