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This resamples a given audio sample returning a new sample after changes have been made. Given that $s$ is the audio sample, and $f$ factor being used to scale the audio.

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**Algorithm 1** Resampling

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**Ensure:**

1: **function** RESAMPLE($s, f$)
2:     $x \leftarrow \frac{1.0}{f}$
3:     $n \leftarrow$ LIST
4:     **if** $x > 1$ **then**
5:         **for** $i = 0, i < len(s)$ **do**
6:             $v \leftarrow 0$
7:             **for** $j = 0, j < x$ **do**
8:                 $v \leftarrow s_{i+j}$
9:             **end for**
10:             $v \leftarrow \frac{v}{x}$
11:             $n \leftarrow n + v$
12:         **end for**
13:     **else**
14:         $k \leftarrow 0$
15:         $l \leftarrow 0.0$
16:         $m \leftarrow \frac{1.0}{f}$
17:         **while** $k < len(s)$ **do**
18:             $n \leftarrow s_k$
19:             $l \leftarrow l + m$
20:             $k \leftarrow (int)l$
21:         **end while**
22:     **end if**
23:     **return** $n$
24: **end function**

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