- $3^{\log_{5/4} n}$

$= 3^{\frac{\log_3 n}{\log_3 \frac{5}{4}}}$ using changes of base formula of log

$= (3^{\log_3 n})^{\frac{1}{\log_3 5/4}}$

$= n^{\frac{1}{\log_3 5/4}}$

$= n^{\frac{\log_{5/4} 3}{\log_{5/4} \frac{5}{4}}}$ using changes of base formula of log

$= n^{\log_{5/4} 3}$

$n^{4.9}$

Change-of-Base Formula:

$$\log_b(x) = \frac{\log_d(x)}{\log_d(b)}$$