$$3\frac{1}{3}ab^{-3}\left(\frac{3}{10}a^{-1}b^{4}\right)=$$

$$=\frac{\cancel{10}}{\cancel{3}}\cdot ab^{-3}\cdot\frac{\cancel{3}}{\cancel{10}}a^{-1}b^{4}=$$

$$=a^{1-1}\cdot b^{-3+4}=a^{0}\cdot b^{1}=1\cdot b=b$$