360 $2^x = 5^y = 10^{\frac{z}{2}}$

$\log_{10} 2^x = \log_{10} 10^{\frac{z}{2}}$

$x \log_{10} 2 = \frac{z}{2} \log_{10} 10 = \frac{z}{2}$

$\therefore x = \frac{z}{2\log_{10} 2}$

同様にして

$\log_{10} 5^y = \log_{10} 10^{\frac{z}{2}}$

$y \log_{10} 5 = \frac{z}{2} \log_{10} 10 = \frac{z}{2}$

$\therefore y = \frac{z}{2\log_{10} 5}$

$\frac{1}{x} + \frac{1}{y} = \frac{2\log_{10} 2}{z} + \frac{2\log_{10} 5}{z}$

$= \frac{2}{z}(\log_{10} 2 + \log_{10} 5)$

$= \frac{2}{z} \log_{10} (2 \times 5)$

$= \frac{2}{z} \log_{10} 10$

$= \frac{2}{z}$ (答)