$4\sqrt{3-4i}$

$z = 3 - 4i$, $x = 3$, $y = -4$, $r = \sqrt{x^2 + y^2} = 5$, $\varphi = arctg\left(\frac{y}{x}\right) = -arctg\left(\frac{4}{3}\right)$

Answer:

$$4\sqrt{3-4i} = 4\sqrt{z} = 4\sqrt{r}\left(\cos\left(\frac{\varphi + 2\pi k}{2}\right) + isin\left(\frac{\varphi + 2\pi k}{2}\right)\right) =$$

$$= 4\sqrt{5}\left(\cos\left(\frac{-arctg\left(\frac{4}{3}\right) + 2\pi k}{2}\right) + isin\left(\frac{-arctg\left(\frac{4}{3}\right) + 2\pi k}{2}\right)\right), k = 0,1;$$

$$k = 0 : \ 4\sqrt{r}\left(\cos\left(\frac{\varphi}{2}\right) + isin\left(\frac{\varphi}{2}\right)\right) = 4\sqrt{5}\left(\cos\left(\frac{-arctg\left(\frac{4}{3}\right)}{2}\right) + isin\left(\frac{-arctg\left(\frac{4}{3}\right)}{2}\right)\right)$$

$$k = 1 : \ 4\sqrt{r}\left(\cos\left(\frac{\varphi + 2\pi}{2}\right) + isin\left(\frac{\varphi + 2\pi}{2}\right)\right) =$$

$$= 4\sqrt{5}\left(\cos\left(\frac{-arctg\left(\frac{4}{3}\right) + 2\pi}{2}\right) + isin\left(\frac{-arctg\left(\frac{4}{3}\right) + 2\pi}{2}\right)\right)$$