

$$\boxed{27} \quad \log 2x^2 = 2 \Rightarrow 10^{\log 2x^2} = 10^2 \Rightarrow 2x^2 = 100 \Rightarrow x^2 = 50 \Rightarrow x = \pm \sqrt{50} = \pm 5\sqrt{2} \approx \pm 7.071$$