

$$\boxed{15} \quad 10^{(x^2)} = 10^{3x-2} \Rightarrow \log 10^{(x^2)} = \log 10^{3x-2} \Rightarrow x^2 = 3x - 2 \Rightarrow x^2 - 3x + 2 = 0 \Rightarrow (x-2)(x-1) = 0 \Rightarrow x = 1 \text{ or } 2.$$