

$$1) \sqrt[0.25]{1,296} \longrightarrow \boxed{6 \mid 4}$$

$$\sqrt[0.25]{1,296} = 6$$

$$2) \sqrt[5]{100,000} \longrightarrow \boxed{100,000 \mid 10}$$

$$\sqrt[5]{100,000} = 100,000$$

$$3) \sqrt[3]{24,389} \longrightarrow \boxed{0 \mid 1}$$

$$\sqrt[3]{1} = 1$$

$$4) \sqrt{21^4} \longrightarrow \boxed{441 \mid 54}$$

$$\sqrt{21^2} = 441$$

$$5) \sqrt[36]{4,096^9} \longrightarrow \boxed{8 \mid 15}$$

$$\sqrt[36]{4,096^9} = \sqrt[4]{4,096} = 8$$

$$6) \sqrt[10]{4^{25}} \longrightarrow \boxed{15 \mid 32}$$

$$\sqrt[10]{4^{25}} = \sqrt[5]{4} = 32$$

$$7) \sqrt[3]{2197} = 2197 \longrightarrow \boxed{150 \mid 2,197}$$



$$8) \sqrt[40]{32,768} \longrightarrow \boxed{1} \boxed{6}$$

$$\sqrt{1} = 1$$

$$9) \sqrt[9]{12^{16}} \rightarrow 12^{\frac{16}{9}} \approx \sqrt[9]{12^2} \rightarrow \sqrt[9]{12^2} = 144$$

$$\hookrightarrow \boxed{4} \boxed{144}$$

$$10) \sqrt[9]{867} \longrightarrow \boxed{0} \boxed{1}$$

$$\sqrt{1} = 1$$

$$11) \sqrt[4]{25^4} = \sqrt[4]{25^2} = 625$$

$$\hookrightarrow \boxed{125} \boxed{625}$$

$$12) \sqrt[56]{2,187^{24}} \sqrt[56]{2187^{\frac{24}{56}}} = \sqrt[56]{2187^{\frac{3}{7}}} = \sqrt[56]{2187^{0.43}} = 27$$

$$\hookrightarrow \boxed{3} \boxed{27}$$