

Quiz – Radicals and Rational Powers

Simplify completely

$$1) (7x^{\frac{1}{3}})(2x^{\frac{1}{4}}) = \boxed{14x^{\frac{1}{12}}}$$

$$3) (x^{\frac{2}{3}})^3 = \boxed{x^2}$$

$$\frac{2}{3} \cdot \frac{3}{1} = \frac{2}{1} = 2$$

$$2) \frac{20x^{\frac{1}{2}}}{5x^{\frac{1}{4}}} = \boxed{4x^{\frac{1}{4}}}$$

$$4) (25x^4y^6)^{\frac{1}{2}} = \boxed{5x^2y^3}$$

$$\frac{1}{2} - \frac{1}{4} = \frac{2}{4} - \frac{1}{4} = \frac{1}{4}$$

$$5) \sqrt{\frac{4}{5}} \cdot \frac{\sqrt{4}}{\sqrt{5}} = \frac{4}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \boxed{\frac{4\sqrt{5}}{5}}$$

$$6) \sqrt[3]{2} \cdot \sqrt{4} = 2^{\frac{1}{3}} \cdot 2^1 = \boxed{2^{\frac{4}{3}}}$$

$$\frac{1}{3} + \frac{1}{1} = \frac{1}{3} + \frac{3}{3} = \frac{4}{3}$$

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