

Nafn: Lausd Eink.: _____

Einfaldaðu og skilaðu svörum með jákvæðum veldisvísum:

$$1) 2 \cdot x^2 \cdot y^2 \cdot 3 \cdot x^3 \cdot y^3 = 2 \cdot 3 \cdot x^{2+3} y^{2+3} = \underline{\underline{6x^5 y^5}}$$

$$2) 10 \cdot x^5 \cdot y^2 (5 \cdot x^3 \cdot y^3)^{-1} = 2 \cdot 5 \cdot x^5 y^2 \cdot 5^{-1} \cdot x^{-3} y^{-3} \\ = 2 \cdot 5^{-1} \cdot x^{5-3} \cdot y^{2-3} = \underline{\underline{\frac{2x^2}{y}}}$$

$$3) \frac{x^4 \cdot y^2}{y^3 x^3} = x^{4-3} \cdot y^{2-3} = x \cdot y^{-1} = \underline{\underline{\frac{x}{y}}}$$

$$4) \left(\frac{x^{-3}}{y^2} \right)^{-2} = \frac{x^6}{y^{-4}} = \underline{\underline{x^6 \cdot y^4}}$$

$$5) \frac{x^2 y^7 x^{-3}}{x^3 y^5} = x^{2-3-3} \cdot y^{7-5} = x^{-4} \cdot y^2 = \underline{\underline{\frac{y^2}{x^4}}}$$

$$6) \frac{(x^2 y^2 x^{-3})^2}{(x^3 y)^{-1} y^5} = \frac{x^4 \cdot y^4 \cdot x^{-6}}{x^{-3} \cdot y^{-1} \cdot y^5} = x^{4-6+3} \cdot y^{4+1-5} = \underline{\underline{x}}$$

$$7) x^{\frac{2}{3}} \cdot x^{\frac{1}{2}} \cdot x^{\frac{3}{4}} = x^{\frac{2 \cdot 4}{3 \cdot 4} + \frac{1 \cdot 6}{2 \cdot 6} + \frac{3 \cdot 3}{4 \cdot 3}} = x^{\frac{8+6+9}{12}} = x^{\frac{23}{12}} = \underline{\underline{\sqrt[12]{x^{23}}}}$$

$$8) \sqrt[5]{x^3} \cdot \sqrt[6]{x^5} \cdot \sqrt[15]{x} : \sqrt[3]{x^2} = x^{\frac{3 \cdot 6}{5 \cdot 6} + \frac{5 \cdot 5}{6 \cdot 5} + \frac{1 \cdot 2}{15 \cdot 2} - \frac{2 \cdot 10}{3 \cdot 10}} = x^{\frac{18+25+2-20}{30}} = x^{\frac{25 \cdot 5}{30 \cdot 5}} = \underline{\underline{x^{\frac{5}{6}}}}$$

$$9) \sqrt{48} - \sqrt{75} + \sqrt{3}$$

$$\sqrt{16 \cdot 3} - \sqrt{25 \cdot 3} + \sqrt{3}$$

$$4\sqrt{3} - 5\sqrt{3} + 1\sqrt{3} = \underline{\underline{0}}$$

$$10) \sqrt[3]{40} - \sqrt[3]{135} + \sqrt[3]{5}$$

$$\sqrt[3]{8 \cdot 5} - \sqrt[3]{27 \cdot 5} + \sqrt[3]{5}$$

$$2\sqrt[3]{5} - 3\sqrt[3]{5} + 1\sqrt[3]{5} = \underline{\underline{0}}$$