Simplify:

1.
$$\sqrt{20x^7y^4}$$

$$\sqrt{4\sqrt{5}\sqrt{x^6}\sqrt{x^6}\sqrt{x^4}\sqrt{y^4}}$$

$$2\sqrt{5}\cdot x^3\sqrt{x}\sqrt{y^4}$$

$$2\sqrt{5}\cdot x^3\sqrt{x}\sqrt{y^4}$$

$$2\sqrt{5}\cdot x^3\sqrt{x}\sqrt{y^4}$$

2.
$$\sqrt{32x^5y^3z^9}$$

 $\sqrt{16\sqrt{2}} \times \sqrt{4} \times \sqrt{y^2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2} \times \sqrt{2} = \sqrt{2 \times 2} \times \sqrt{2} \times \sqrt{2$

3.5.5

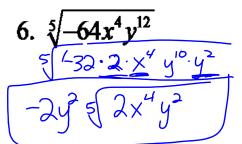
3.
$$\sqrt[3]{75x^5y^4z^2}$$
4. $\sqrt[3]{-8x^9y^6}$

$$= \sqrt[3]{75} \times \sqrt[3]{x^3} \cdot \sqrt[3]{x^2} \cdot \sqrt[3]{y^3} \cdot \sqrt[3]{z^2}$$

$$= \times \sqrt[3]{75} \times \sqrt[3]{x^2} \cdot \sqrt[3]{y^3} \cdot \sqrt[3]{z^2}$$

$$= \times \sqrt[3]{75} \times \sqrt[3]{y^3} \cdot \sqrt[3]{z^2}$$

5.
$$\sqrt[4]{32x^7y^{10}}$$
 $\sqrt[4]{16} 2\sqrt[4]{x^3y^2}$
 $2\times y^2 \sqrt[4]{2\times^3y^2}$



7.
$$\sqrt{-5} \cdot \sqrt{10}$$

$$= \sqrt{-50}$$

$$= \sqrt{-50}$$

$$= \sqrt{-1025} \cdot 2$$

$$= 2 \cdot 5 \cdot 5$$

$$= 5 \cdot 5 \cdot 5$$

8.
$$\sqrt{6x^7y^4} \cdot \sqrt{3xy^4}$$

= $\sqrt{8x^8y^8}$

= $\sqrt{9}\sqrt{2} + \sqrt{8}\sqrt{9}$

= $\sqrt{9}\sqrt{2} + \sqrt{8}\sqrt{9}$

= $\sqrt{3}\sqrt{9}\sqrt{2}$

= $\sqrt{3}\sqrt{9}\sqrt{2}$

$$9. -\sqrt[3]{2x^3y^2} \cdot 4\sqrt[3]{12x^4y^4}$$

$$-4324x^{7}y^{6} = -488\cdot3x^{6}\cdot x\cdot y^{6}$$

$$= -4\cdot2x^{2}y^{2}\sqrt[3]{3}x$$

$$= -8x^{2}y^{2}\sqrt[3]{3}x$$

10.
$$\frac{\sqrt{5x^{5}y^{2}}}{\sqrt{3x^{2}y^{5}}} = \sqrt{\frac{5x^{5}y^{2}}{3x^{2}y^{5}}}$$

$$= \sqrt{\frac{5x^{3}}{3y^{3}}} = \sqrt{\frac{5x^{2}x}{3(y^{3}y^{5})}}$$

$$= \frac{x}{y} \sqrt{\frac{5x}{3y}} \sqrt{\frac{3y}{3y}}$$

$$= \frac{x}{y} \sqrt{\frac{15xy}{3y}} \sqrt{\frac{3y^{2}}{3y^{2}}}$$