

Simplify the expression, in simplest radical form.

1.) $\sqrt{18x^2y^4}$

$$\sqrt{9 \cdot 2x^2y^4}$$

$$3xy^2\sqrt{2}$$

2.) $\sqrt[3]{8x^3y^9}$

$$= 2xy^3$$

3.) $\sqrt[4]{32xy^7}$

$$\sqrt[4]{16 \cdot 2xy^7}$$

$$2y\sqrt[4]{2xy^3}$$

4.) $\sqrt[3]{-27}$

$$= -3$$

$$(-3)(-3)(-3) = -27$$

5.) The expression $\sqrt{2x^3y^4}$ is equivalent to

$$2^{\frac{1}{2}}x^{\frac{3}{2}}y^2$$

(a) $2x^3y^2$

(b) $2x^{\frac{3}{2}}y^2$

(c) $2^{\frac{1}{2}}x^{\frac{3}{2}}y^2$

(d) $2^{\frac{1}{2}}x^2y^4$

6.) The expression $\sqrt[5]{32xy^2}$ is equivalent to

$$2x^{\frac{1}{5}}y^{\frac{2}{5}}$$

(a) $32x^{\frac{1}{5}}y^{\frac{2}{5}}$

(b) $32x^5y^{\frac{5}{2}}$

(c) $2xy^{\frac{2}{5}}$

(d) $2x^{\frac{1}{5}}y^{\frac{2}{5}}$