Review

Evaluate.

1) $(2x^3y^1)(3x^1y^3) =$

$6x^4y^4$

2) $(8x^3y^4)^{\frac{1}{3}}$

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

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

3) $\dfrac{2a^2b^{-2}}{6a^{-3}b}$

$= \dfrac{2a^2a^3}{3bb^2}$

$= \dfrac{a^5}{3b^3}$

4) $\left(\dfrac{2a}{b^2}\right)^{-3} = \left(\dfrac{b^2}{2a}\right)^3$

$= \dfrac{2^{-3}a^{-3}}{b^{-6}}$

$= \dfrac{b^6}{2^3a^3} = \dfrac{b^6}{8a^3}$

5) $\left(\frac{w^{-2}}{2x^3}\right)^{-1}$

$= \frac{w^2}{2^{-1}x^{-3}}$

$= 2^1 w^2 x^3$

6) $(16)^{\frac{3}{2}}$

$= \left(\sqrt{16}\right)^3 = 64$

23. $3^{\frac{1}{2}} \times 3^{\frac{3}{2}}$

$= 3^{\frac{1}{2}+\frac{3}{2}} = 3^{\frac{4}{2}} = 3^2 = 9$

50. $\sqrt{\dfrac{9a^{-2}b^{6}}{1}} = \sqrt{\dfrac{9b^{6}}{a^{2}}}$

$= \dfrac{3b^{3}}{a}$