

Sheet #22a

Simplify so that all the powers are positive (this may involve fractions):

1) $(x^4)^{-2}$

2) $\frac{y^6}{y^{-2}}$

3) $(xy^4)^2$

4) $\left(\frac{5}{a^3}\right)^{-2}$

5) $\frac{5y^4}{10y^{-1}}$

6) $\frac{p^{-2}}{p^{-6}}$

7) $\left(\frac{a}{b^{-2}}\right)^3$

8) $5(2y^{-2})^3$

Simplify to positive numerical exponents:

9) $\frac{\sqrt{x}}{x}$

10) $s(s^3)^{0.5}$

11) $\frac{\sqrt{x^9}}{\sqrt{x}}$

12) $\sqrt[2]{t} \times \sqrt[3]{t}$

13) $\sqrt{\frac{25x^9}{16y^{16}}}$

14) $6(ab^{-1})^2$

15) $\frac{y^6}{2} \div y^{-2}$

16) $(5ab^{-2})^{-2}$