

ALL ANSWERS
MUST INCLUDE ONLY
POSITIVE EXPONENTS!

Date _____

Period

$$2) 7p^{-4} \cdot 5p^4 r^{-3}$$

$$7.5 \quad P^{-4+4} R^{-3}$$

$$35 \quad P^0 R^{-3} =$$

$$35 R^{-3} =$$

$$\frac{35}{R^3}$$

Remember: $P^0 = 1$

4) $(-2a^0b^3)^4 \cdot (-2b)^2$

$$\begin{aligned} & \underline{(-2)^4 a^0 b^{12}} \cdot \underline{(-2)^2 b^2} = \\ & 16 \cdot 4 \cdot b^{2+12} = 64 b^{14} \end{aligned}$$

6) $(2x^{-1}z^{-4})^4 \cdot yzx^3$

$$2^4 x^{-4} z^{-16} \cdot x^3 y z$$

$$16 x^{-4+3} y z^{1+(-16)} =$$

$$16 x^{-1} y z^{-15}$$

$$\frac{16y}{xz^{15}}$$

8) $\left(\frac{2y^3 \cdot x^2}{x^4 y^0} \right)^3$ ← Simplify inside ()'s

$$\frac{4xy^2}{6x^0y^{-7}} = \frac{2xy^2y^7}{3} = \boxed{\frac{2xy^9}{3}}$$

or you could
subtract exp's
 $y^2 - (-7) = y^9$

$$(2y^3)^3$$
$$2^3 y^9 =$$
$$8y^9$$

9) $\frac{(2x^{-2}y^{-4})^{-3}}{2x^4 \cdot 2x^2y^3}$

← simplify num

← simplify den

$\frac{2^{-3}x^6y^{12}}{4x^6y^3} = \frac{y^{12-3}}{2^3 \cdot 4}$

$= \frac{y^9}{32}$

10) $\frac{(-a^3b^2)^4}{(-2a^2)^3} = \frac{(-1)^4 a^{12} b^8}{(-2)^3 a^6} = \frac{1 a^{12-6} b^8}{-8} = \boxed{\frac{a^6 b^8}{-8}}$