

Warm-up

2, 8, 5

$$\textcircled{5} \frac{14x^2y^4}{18x^4y^3} = \frac{7}{9}x^{2-4}y^{4-3}$$

$$\boxed{\frac{7}{9}x^{-2}y}$$

$$\frac{\cancel{7} \cancel{x} \cancel{x} \cancel{y} \cancel{y} \cancel{y} \cancel{y}}{\cancel{9} \cancel{x} \cancel{x} \cancel{x} \cancel{y} \cancel{y} \cancel{y}} = \boxed{\frac{7y}{9x^2}}$$

$$\textcircled{8} \frac{20x^3y^4z^2}{60x^5yz^3} = \frac{1}{3}x^{3-5}y^{4-1}z^{2-3} = \frac{1}{3}x^{-2}y^3z^{-1}$$

$$\frac{\cancel{1} \cdot \cancel{x} \cdot \cancel{x} \cdot \cancel{x} \cdot \cancel{y} \cdot \cancel{y} \cdot \cancel{y} \cdot \cancel{z} \cdot \cancel{z}}{\cancel{3} \cdot \cancel{x} \cdot \cancel{x} \cdot \cancel{x} \cdot \cancel{x} \cdot \cancel{y} \cdot \cancel{z} \cdot \cancel{z} \cdot \cancel{z}} = \frac{1 \cdot y^3}{3 \cdot x^2 z} = \boxed{\frac{y^3}{3x^2z}}$$

Warm-up

Wednesday 8/21

Simplify

1. $\frac{x^5}{x^6}$

XXXXXX
XXXXXX

x^{-1} OR $\frac{1}{x}$

2. $(k^2)(k^6)$

k^{2+6}
 k^8

3. 12^0

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4. ~~5^{-1}~~

5. $\frac{x^{12}}{x^5}$

x^{12-5}
 x^7

6. $\left(\frac{b^4y^3k^8}{z^{23}a^6}\right)^0$

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Negative Exponents:

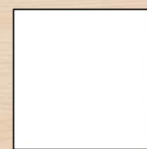
$$a^{-n} = \frac{1}{a^n}$$

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

$$\frac{y^{-n}}{4} = \frac{1}{4y^n}$$

$$\frac{1}{z^{-6}} = 1 \cdot z^6$$

$$\frac{b^{-27}}{a^{-1}} = \frac{a}{b^{27}}$$



$$\left(\frac{4}{3}\right)^{-4} =$$



$$\left(\frac{3}{4}\right)^4 = \boxed{\frac{3^4}{4^4}}$$

$$\left(\frac{-15u^{-1}}{5u^3}\right) =$$



$$\frac{-15}{5u^3u} = \frac{-3}{u^{3+1}} = \boxed{\frac{-3}{u^4}}$$

$$\left(\frac{m^{-4}n^{-5}}{m^4n^3}\right) =$$

$$\frac{1}{m^4m^4n^5n^3} = \frac{1}{m^{4+4}n^{5+3}} = \boxed{\frac{1}{m^8n^8}}$$

$$\#9 \quad \frac{42xyz^3}{49x^3y^2z} = \frac{6}{7} x^{1-3} y^{2-2} z^{3-1}$$

$$= \frac{6}{7} x^{-2} y^0 z^2$$

$$= \frac{6 \cdot 1 \cdot z^2}{7x^2}$$

$$\boxed{\frac{6z^2}{7x^2}}$$

