

W-PA Pre-Algebra Week 26 3/29

$$1.) \quad \frac{16}{39} = X + \frac{1}{3}$$

$$\quad \quad \quad -\frac{1}{3} \quad \quad -\frac{1}{3}$$

$$X = \frac{16}{39} - \frac{1}{3}$$

$$\frac{16}{39} = \frac{16}{39}$$

$$\frac{1}{3} \xrightarrow{\times 13} \frac{13}{39}$$

$$X = \frac{16}{39} - \frac{13}{39}$$

$$\frac{3}{39} \div 3 = \boxed{\frac{1}{13}}$$

$$2.) \quad 3\frac{1}{4} = X - \frac{3}{8}$$

$$\quad \quad \quad +\frac{3}{8} \quad \quad +\frac{3}{8}$$

$$X = 3\frac{1}{4} + \frac{3}{8}$$

$$3\frac{1}{4} = \frac{(3 \times 4) + 1}{4} = \frac{13}{4}$$

$$X = \frac{13}{4} + \frac{3}{8}$$

$$X = \frac{26}{8} + \frac{3}{8}$$

$$\boxed{X = \frac{29}{8}}$$

$$\frac{13}{4} \xrightarrow{\times 2} \frac{26}{8}$$

$$\frac{3}{8} = \frac{3}{8}$$

$$3.) \quad -2\frac{3}{4} = X - 4\frac{1}{2}$$

$$\quad \quad \quad +4\frac{1}{2} \quad \quad +4\frac{1}{2}$$

$$X = 4\frac{1}{2} - 2\frac{3}{4}$$

$$4\frac{1}{2} = \frac{(4 \times 2) + 1}{2} = \frac{9}{2}$$

$$2\frac{3}{4} = \frac{(2 \times 4) + 3}{4} = \frac{11}{4}$$

$$X = \frac{9}{2} - \frac{11}{4}$$

$$X = \frac{18}{4} - \frac{11}{4} =$$

$$\boxed{X = \frac{7}{4}}$$

$$\frac{9}{2} \xrightarrow{\times 2} \frac{18}{4}$$

$$\frac{11}{4} = \frac{11}{4}$$

$$2\frac{5}{9} = \frac{2}{3} X$$

$$X = 2\frac{5}{9} \div \left(\frac{2}{3}\right)$$

Keep
Change
Flip!

$$\frac{3}{2} \left(2\frac{5}{9}\right) = \left(\frac{2}{3} X\right) \frac{3}{2} \text{ inverse}$$

$$2\frac{5}{9} * \frac{3}{2}$$

$$2\frac{5}{9} = \frac{(9*2)+5}{9} = \frac{23}{9}$$

$$\frac{23}{9} \div 3 = \frac{23}{9} * \frac{1}{3} = \frac{23}{27}$$

$$1.) \frac{7}{6} \left(\frac{6}{7} X\right) = \left(\frac{-4}{21}\right) \frac{7}{6}$$

$$2.) \frac{4}{3} \left(\frac{3}{4} X\right) = \left(\frac{8}{9}\right) \frac{4}{3}$$

$$X = \frac{-4}{21} * \frac{7}{6} \div 7$$

$$X = \frac{8}{9} * \frac{4}{3} = \frac{32}{27}$$

$$\frac{-4}{3} * \frac{1}{6} \div 7 = \frac{-2}{3} * \frac{1}{3} = \frac{-2}{9}$$

$$1.) \frac{3}{2} \left(\frac{2}{3} x \right) = \left(\frac{4}{7} \right) \frac{3}{2}$$

$$2.) \frac{9}{2} \left(\frac{2}{9} x \right) = \left(\frac{3}{7} \right) \frac{9}{2}$$

$$3.) \frac{7}{2} \left(\frac{2}{7} x \right) = \left(\frac{5}{8} \right) \frac{7}{2}$$

$$4.) 5 \left(\frac{1}{5} x \right) = \left(\frac{11}{10} \right) 5$$

$$5.) \frac{12}{9} \left(\frac{9}{12} x \right) = \left(\frac{1}{3} \right) \frac{12}{9}$$

$$6.) \frac{8}{7} \left(\frac{7}{8} x \right) = \left(\frac{2}{3} \right) \frac{8}{7}$$

$$7.) \frac{5}{2} \left(\frac{2}{5} x \right) = \left(\frac{8}{11} \right) \frac{5}{2}$$

$$\left(a b^2 \right)^3 = a b^2 * a b^2 * a b^2$$

$a^{1+1+1} = a^3$ $a^3 b^6$

$b^{2+2+2} = b^6$

$$\left(4xy \right)^3 = \boxed{4^3 x^3 y^3}$$

$4^3 = 4 \cdot 4 \cdot 4 = 64$

$\boxed{64 x^3 y^3}$

$$\left(\frac{a^3}{2b^4} \right)^5 = \frac{a^{15}}{2^5 b^{20}} \quad \left(\frac{3}{4} \right)^5$$

1.) $(5mp^2)^2$

$$5^2 m^2 p^4 \text{ or } 25m^2 p^4$$

2.) $(6a^3b^4)^3$

$$6^3 a^9 b^{12} \quad 216 a^9 b^{12}$$

3.) $(m^4n^3)^2$

$$m^{4 \cdot 2} n^{3 \cdot 2} = m^8 n^6$$

4.) $\left(\frac{7x^2z^4}{3y} \right)^5$

$$\frac{7^5 x^{10} z^{20}}{3^5 y^5}$$

5.) $(2xy^4)^0 = 1$

6.) $\left(\frac{8ab^6}{c^5} \right)^3$

$$\frac{8^3 a^3 b^{18}}{c^{15}}$$

