

Period _____

Notes: Name _____
Period _____
Proportions.

1. $\frac{6}{2} = \frac{X}{3}$

~~$\frac{6}{2} = \frac{X}{3}$~~

$$2X = 6(3)$$

$$\frac{2X}{2} = \frac{18}{2}$$

$X = 9$

check

$$\frac{6}{2} = \frac{X}{3}$$

~~$\frac{6}{2} = \frac{9}{3}$~~

$$2(9) = 3(6)$$

$$18 = 18 \checkmark$$

2) $\frac{7}{m} = \frac{5}{9}$

~~$\frac{7}{m} = \frac{5}{9}$~~

$$5m = 7(9)$$

$$\frac{5m}{5} = \frac{63}{5}$$

$m = 12.6$

check

$$\frac{7}{m} = \frac{5}{9}$$

~~$\frac{7}{12.6} = \frac{5}{9}$~~

$$12.6(5) = 7(9)$$

$$63 = 63 \checkmark$$

$$3) \quad \frac{9}{x} = \frac{4}{7}$$

$$4x = 9(7)$$

$$\frac{4x}{4} = \frac{63}{4}$$

$$x = 15.75$$

check

$$\frac{9}{x} = \frac{4}{7}$$

$$\frac{9}{15.75} = \frac{4}{7}$$

$$4(15.75) = 9(7)$$

$$63 = 63 \checkmark$$

$$4) \quad \frac{2}{7} = \frac{x}{5}$$

~~$$\frac{2}{7} = \frac{x}{5}$$~~

$$7x = 2(5)$$

$$\frac{7x}{7} = \frac{10}{7}$$

$$x = 1.43$$

check

$$\frac{2}{7} = \frac{x}{5}$$

~~$$\frac{2}{7} = \frac{1.43}{5}$$~~

$$1.43(7) = 2(5)$$

$$10 = 10 \checkmark$$

check

$$\frac{7}{6} = \frac{8}{p}$$

$$\frac{7}{6} = \frac{8}{6.86}$$

$$6(8) = 6.86(7) = 48.02$$

$$48 = 48 \checkmark$$

$$5) \quad \frac{7}{6} = \frac{8}{p}$$

~~$$\frac{7}{6} = \frac{8}{p}$$~~

$$7p = 6(8)$$

$$\frac{7p}{7} = \frac{48}{7}$$

$$p = 6.857$$

$$p = 6.86$$

$$\begin{aligned}
 19 &= 9 \\
 9 &= (1)9 \\
 (5)2 &= (5-4)9
 \end{aligned}$$

~~$$\frac{2}{6} = \frac{4-3}{3}$$~~

C R E C H

$$\begin{aligned}
 19 &= 9 \\
 9 &= (1)9 \\
 6X &= 3(2)
 \end{aligned}$$

~~$$\frac{3}{6} = \frac{X}{2}$$~~

C R E C H

$$\frac{9}{h4} = \frac{9}{X9}$$

$$\begin{aligned}
 81+ & \quad (81+ \\
 9 &= 18) \times 9 \\
 (5)2 &= (5-X)9
 \end{aligned}$$

~~$$\frac{2}{3} = \frac{X-3}{9}$$~~

$$\frac{2}{3} = \frac{X-3}{9} \quad (t)$$

$$1 = X$$

$$\begin{aligned}
 \frac{1}{9} &= \frac{9}{6X} \\
 6X &= 2(3)
 \end{aligned}$$

~~$$\frac{3}{6} = \frac{X}{2}$$~~

$$\frac{3}{2} = \frac{X}{6}$$

~~2000~~

(9)

8)

$$\frac{2}{x-3} = \frac{4}{7}$$

~~$$\frac{2}{x-3} = \frac{4}{7}$$~~

$$4(x-3) = 2(7)$$

$$4x - 12 = 14$$

$$\frac{4x}{4} = \frac{26}{4}$$

$$x = 6.5$$

check

$$\frac{2}{x-3} = \frac{4}{7}$$

$$\frac{2}{6.5-3} = \frac{4}{7}$$

$$4(6.5-3) = 2(7)$$

$$4(3.5) = 14$$

$$14 = 14 \checkmark$$

9)

$$\frac{x+3}{5} = \frac{3}{4}$$

~~$$\frac{x+3}{5} = \frac{3}{4}$$~~

$$5(3) = 4(x+3)$$

$$15 = 4x + 12$$

$$-12$$

$$\frac{3}{4} = \frac{4x}{4}$$

$$0.75 = x$$

check

$$\frac{x+3}{5} = \frac{3}{4}$$

$$\frac{0.75+3}{5} = \frac{3}{4}$$

$$5(3) = 4(0.75+3)$$

$$15 = 4(3.75)$$

$$15 = 15 \checkmark$$

10) ~~$\frac{6}{7} = \frac{7}{x+3}$~~

$$7(7) = 6(x+3)$$

$$49 = 6x + 18$$

$$\begin{array}{r} 49 \\ -18 \\ \hline 31 \end{array} = \frac{6x}{6}$$

$$5.17 = x$$

$$6 \overline{) 31} \begin{array}{r} 5.17 \\ 30 \\ \hline 10 \end{array}$$

check

$$\frac{6}{7} = \frac{7}{x+3}$$

$$\frac{6}{7} = \frac{7}{5.17+3}$$

$$7(7) = 6(5.17+3)$$

$$49 = 6(8.17)$$

$$49 = 49 \checkmark$$

11) $\frac{6}{m+6} = \frac{7}{4}$

 ~~$\frac{6}{m+6} = \frac{7}{4}$~~

$$7(m+6) = 6(4)$$

$$7m + 42 = 24$$

$$\begin{array}{r} 7m + 42 \\ -42 \\ \hline 7m = -18 \end{array}$$

$$\frac{7m}{7} = \frac{-18}{7}$$

$$m = -2.5714$$

$$m = -2.57$$

check

$$\frac{6}{m+6} = \frac{7}{4}$$

$$\frac{6}{-2.57+6} = \frac{7}{4}$$

$$6(4) = 7(-2.57+6)$$

$$24 = 7(3.43)$$

$$24 = 24 \checkmark$$

$$12) \frac{3}{4} = \frac{x-2}{7}$$

~~$$\frac{3}{4} = \frac{x-2}{7}$$~~

$$7(3) = 4(x-2)$$

$$21 = 4x \begin{matrix} + 8 \\ + 8 \end{matrix}$$

$$\frac{29}{4} = \frac{4x}{4}$$
$$7.25 = x$$

check

$$\frac{3}{4} = \frac{x-2}{7}$$
$$\frac{3}{4} = \frac{7.25-2}{7}$$

$$4(7.25-2) = 3(7)$$

$$4(5.25) = 21$$

$$21 = 21 \checkmark$$