

Solve each proportion Leave all Answers as IMPROPER FRACTIONS.

$$1) \frac{b}{5} = \frac{6}{2} \quad \frac{2b}{2} = \frac{30}{2}$$

$$\boxed{b = 15}$$

$$2) \frac{n}{8} \times \frac{4}{7} \quad \frac{7n}{7} = \frac{32}{7}$$

$$\boxed{n = 4.57}$$

$$3) \frac{4}{b} \times \frac{2}{5} \quad \frac{2b}{2} = \frac{20}{2}$$

$$\boxed{b = 10}$$

$$4) \frac{5}{4} \times \frac{3}{x} \quad \frac{5x}{5} = \frac{12}{5}$$

$$\boxed{x = 2.4}$$

$$5) \frac{k}{2} = \frac{6}{8} \quad \frac{8k}{8} = \frac{12}{8}$$

$$\boxed{k = 1.5}$$

$$6) \frac{p}{8} \times \frac{5}{4} \quad \frac{4p}{4} = \frac{40}{4}$$

$$\boxed{p = 10}$$

$$7) \frac{x-8}{5} = \frac{5}{6}$$

$$6(x-8) = 25$$

$$6x - 48 = 25$$

$$+48 \quad +48$$

$$6x = 73 \rightarrow \boxed{\frac{73}{6}}$$

$$\boxed{x = 12.1\bar{6}}$$

$$8) \frac{6}{x+2} \times \frac{8}{5} \quad 8x + 16 = 30$$

$$-16 \quad -16$$

$$\frac{8x}{8} = \frac{14}{8}$$

$$\boxed{x = 1.75}$$

$$9) \frac{7}{4} \times \frac{2}{x+7}$$

$$7(x+7) = 8$$

$$7x + 49 = 8$$

$$-49 \quad -49$$

$$\frac{7x}{7} = \frac{-41}{7}$$

$$\boxed{x = -5.86}$$

$$10) \frac{8}{3} \times \frac{5}{b-3}$$

$$8b - 24 = 15$$

$$8b = 39$$

$$8(b-3) = 15$$

$$\boxed{b = 4.875}$$

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$$11) \frac{7}{8} = \frac{x-8}{x} \quad 8(x-8) = 7x$$

$$\begin{array}{r} 8x - 64 = 7x \\ -7x + 64 \quad -7x + 64 \\ \hline x = 64 \end{array}$$

$$13) \frac{3}{7} = \frac{p}{p+2} \quad 3p+6 = 7p$$

$$\begin{array}{r} 3p + 6 = 7p \\ -3p \quad -3p \\ \hline 6 = 4p \\ \frac{6}{4} = \frac{4p}{4} \end{array} \quad p = 1.5$$

$$15) \frac{x+8}{5} = \frac{x+8}{4}$$

$$\begin{array}{r} 4x + 32 = 5x + 40 \\ -4x - 40 \quad -4x - 40 \\ \hline -8 = x \end{array} \quad x = -8$$

$$17) \frac{x+1}{5} = \frac{x-2}{3}$$

$$\begin{array}{r} 3x + 3 = 5x - 10 \\ -3x \quad -3x \\ \hline 3 = 2x - 10 \\ +10 \quad +10 \\ \hline 13 = 2x \\ \frac{13}{2} = \frac{2x}{2} \\ x = 6.5 \end{array}$$

$$12) \frac{x+5}{x} = \frac{5}{2} \quad 2(x+5) = 5x$$

$$\begin{array}{r} 2x + 10 = 5x \\ -2x \quad -2x \\ \hline 10 = 3x \\ \frac{10}{3} = \frac{3x}{3} \\ x = 3.\overline{3} \end{array}$$

$$14) \frac{8}{4} = \frac{v}{v-7}$$

$$\begin{array}{r} 8v - 56 = 4v \\ -8v \quad -8v \\ \hline -56 = -4v \\ v = 14 \end{array}$$

$$16) \frac{3}{5} = \frac{r-1}{r-5} \quad 3r-15 = 5r-5$$

$$\begin{array}{r} 3r - 15 = 5r - 5 \\ -3r + 5 \quad -3r + 5 \\ \hline -10 = 2r \\ r = -5 \end{array}$$

$$18) \frac{n-1}{8} = \frac{n-5}{7}$$

$$\begin{array}{r} 7n - 7 = 8n - 40 \\ -7n \quad -7n \\ \hline -7 = n - 40 \\ +40 \quad +40 \\ \hline 33 = n \\ n = 33 \end{array}$$

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