Solving Equations Using the Multiplication Principal of Equality

1. $\frac{x}{5} = 35$ $\quad (5)\frac{x}{5} = 35(5)$ $\quad \begin{array}{r} 35 \\ \times\ 5 \\ \hline 175 \end{array}$ $\quad \boxed{x = 175}$

2. $\frac{x}{6} = 30$ $\quad (6)\frac{x}{6} = 30(6)$ $\quad 180$ $\quad \boxed{x = 180}$

3. $(-2)\frac{x}{-2} = 10(-2)$ $\quad -20$ $\quad \boxed{x = -20}$

4. $(5)15 = \frac{a}{5}(5)$ $\quad 75$ $\quad \begin{array}{r} 15 \\ \times\ 5 \\ \hline 75 \end{array}$ $\quad \boxed{75 = a}$

5. $(6)42 = \frac{n}{6}(6)$ $\quad 252$ $\quad \boxed{252 = n}$ $\quad \begin{array}{r} 42 \\ \times\ 6 \\ \hline 252 \end{array}$

6. $\left(\frac{4}{3}\right)\frac{3}{4}x = \frac{15}{1}\left(\frac{4}{3}\right)$ $\quad \frac{3 \cdot 5 \cdot 4}{1 \cdot 3}$ $\quad \boxed{x = 20}$

7. $\left(\frac{5}{1}\right)\frac{1}{5}a = \frac{4}{1}\left(\frac{5}{1}\right)$ $\quad \boxed{a = 20}$

8. $\left(\frac{7}{3}\right)\frac{3}{7}a = \frac{12}{1}\cdot\left(\frac{7}{3}\right)$ $\quad \boxed{a = 28}$ $\quad \frac{4 \cdot 3 \cdot 7}{3} = 28$

9. $\left(\frac{4}{1}\right)\frac{1}{4}a = \frac{2}{3}\cdot\left(\frac{4}{1}\right) = \frac{8}{3}$ $\quad \boxed{a = \frac{8}{3}}$

10. $\left(\frac{3}{1}\right)\cdot\frac{4}{5} = \frac{1}{3}y\left(\frac{3}{1}\right)$ $\quad \boxed{\frac{12}{5} = y}$