

$$\textcircled{5} \frac{3}{1} \frac{|4x-24|}{9} = 8 \left(\frac{9}{1}\right)$$

$$|4x-24| = 72$$

$$4x-24 = -72$$

$$\begin{array}{r} +24 \quad +24 \\ \hline \end{array}$$

$$\frac{4x}{4} = \frac{-48}{4}$$

$$x = -12$$

$$4x-24 = 72$$

$$\begin{array}{r} +24 \quad +24 \\ \hline \end{array}$$

$$\frac{4x}{4} = \frac{96}{4}$$

$$x = 24$$

$$x = \{-12, 24\}$$

$$\textcircled{6} \frac{3}{8} \frac{|7x+28|}{8} - 4 = 17$$

$$\begin{array}{r} +4 \quad +4 \\ \hline \end{array}$$

$$\textcircled{8} \frac{3}{1} \frac{|7x+28|}{8} = 21 \left(\frac{8}{1}\right)$$

$$\frac{3|7x+28|}{3} = \frac{168}{3}$$

$$|7x+28| = 56$$

$$7x+28 = -56$$

$$\begin{array}{r} -28 \quad -28 \\ \hline \end{array}$$

$$\frac{7x}{7} = \frac{-84}{7}$$

$$x = -12$$

$$7x+28 = 56$$

$$\begin{array}{r} -28 \quad -28 \\ \hline \end{array}$$

$$\frac{7x}{7} = \frac{28}{7}$$

$$x = 4$$

$$\textcircled{7} \frac{13}{1} \frac{3|15-5x|+12}{13} = 9 \left(\frac{13}{1}\right)$$

$$\frac{3|15-5x|+12}{12} = 117$$

$$\begin{array}{r} -12 \\ \hline \end{array}$$

$$\frac{3|15-5x|}{3} = \frac{105}{3}$$

$$|15-5x| = 35$$

$$15-5x = -35$$

$$\begin{array}{r} -15 \quad -15 \\ \hline \end{array}$$

$$\frac{-5x}{-5} = \frac{-50}{-5}$$

$$x = 10$$

$$15-5x = 35$$

$$\begin{array}{r} -15 \quad -15 \\ \hline \end{array}$$

$$\frac{-5x}{-5} = \frac{20}{-5}$$

$$x = -4$$

$$x = \{-4, 10\}$$

$$\textcircled{8} \frac{4}{1} \frac{5|11x+33|-12}{4} = 52 \left(\frac{4}{1}\right)$$

$$\frac{5|11x+33|-12}{+12 \quad +12} = 208$$

$$\frac{5|11x+33|}{5} = \frac{220}{5}$$

$$|11x+33| = 44$$

$$11x+33 = -44$$

$$\begin{array}{r} -33 \quad -33 \\ \hline \end{array}$$

$$\frac{11x}{11} = \frac{-77}{11}$$

$$x = -7$$

$$11x+33 = 44$$

$$\begin{array}{r} -33 \quad -33 \\ \hline \end{array}$$

$$\frac{11x}{11} = \frac{11}{11}$$

$$x = 1$$

$$x = \{-7, 1\}$$

$$\textcircled{9} \quad -2 \left| \frac{1}{2}x + 8 \right| - 5 = -25$$

$$\quad \quad \quad +5 \quad +5$$

$$\frac{-2 \left| \frac{1}{2}x + 8 \right|}{-2} = \frac{-20}{-2}$$

$$\left| \frac{1}{2}x + 8 \right| = 10$$

$$\frac{\frac{1}{2}x + 8}{-2} = \frac{-10}{-2}$$

$$\frac{\frac{1}{2}x}{\left(\frac{1}{2}\right)} = \frac{-12}{\left(\frac{1}{2}\right)}$$

$$x = -36$$

$$\frac{\frac{1}{2}x + 8}{-2} = \frac{10}{-2}$$

$$\frac{\frac{1}{2}x}{\left(\frac{1}{2}\right)} = \frac{2}{\left(\frac{1}{2}\right)}$$

$$x = 4$$

$$X = \{-36, 4\}$$

$$\textcircled{10} \quad 6 \left| \frac{1}{4}x - 4 \right| - 73 = -13$$

$$\quad \quad \quad +73 \quad +73$$

$$\frac{6 \left| \frac{1}{4}x - 4 \right|}{6} = \frac{60}{6}$$

$$\left| \frac{1}{4}x - 4 \right| = 10$$

$$\frac{\frac{1}{4}x - 4}{+4} = \frac{-10}{+4}$$

$$\frac{\frac{1}{4}x}{\left(\frac{1}{4}\right)} = \frac{-6}{\left(\frac{1}{4}\right)}$$

$$x = -24$$

$$\frac{\frac{1}{4}x - 4}{+4} = \frac{10}{+4}$$

$$\frac{\frac{1}{4}x}{\left(\frac{1}{4}\right)} = \frac{14}{\left(\frac{1}{4}\right)}$$

$$x = 56$$

$$X = \{-24, 56\}$$

$$\textcircled{11} \quad 4 \left| 5x - 10 \right| + 52 = 12$$

$$\quad \quad \quad -52 \quad -52$$

$$\frac{4 \left| 5x - 10 \right|}{4} = \frac{-40}{4}$$

$$\left| 5x - 10 \right| = -10$$

No Solution

ABSOLUTE VALUE CANNOT EQUAL A NEGATIVE NUMBER.

$$\textcircled{12} \quad \frac{3 \left| 12x - 36 \right|}{8} - 7 = 11$$

$$\quad \quad \quad +7 \quad +7$$

$$\left(\frac{8}{1}\right) \frac{3 \left| 12x - 36 \right|}{8} = 18 \left(\frac{8}{7}\right)$$

$$\frac{3 \left| 12x - 36 \right|}{3} = \frac{144}{3}$$

$$\left| 12x - 36 \right| = 48$$

$$\frac{12x - 36}{+36} = \frac{-48}{+36}$$

$$\frac{12x}{12} = \frac{-12}{12}$$

$$x = -1$$

$$\frac{12x - 36}{+36} = \frac{48}{+36}$$

$$\frac{12x}{12} = \frac{84}{12}$$

$$x = 7$$

$$X = \{-1, 7\}$$