

Name: _____

Date: _____

2-step backtracking: Answers

(1)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 6} & & \xrightarrow{+10} & \\
 \boxed{x} & & \boxed{\frac{x}{6}} & & \boxed{\frac{x}{6} + 10} \\
 & \xleftarrow{\times 6} & & \xleftarrow{-10} &
 \end{array}$$

(2)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 2} & & \xrightarrow{+1} & \\
 \boxed{x} & & \boxed{\frac{x}{2}} & & \boxed{\frac{x}{2} + 1} \\
 & \xleftarrow{\times 2} & & \xleftarrow{-1} &
 \end{array}$$

(3)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 4} & & \xrightarrow{+1} & \\
 \boxed{x} & & \boxed{\frac{x}{4}} & & \boxed{\frac{x}{4} + 1} \\
 & \xleftarrow{\times 4} & & \xleftarrow{-1} &
 \end{array}$$

(4)

$$\begin{array}{ccccc}
 & \xrightarrow{-3} & & \xrightarrow{\times 9} & \\
 \boxed{x} & & \boxed{x - 3} & & \boxed{9(x - 3)} \\
 & \xleftarrow{+3} & & \xleftarrow{\div 9} &
 \end{array}$$

(5)

$$\begin{array}{ccccc}
 & \xrightarrow{-7} & & \xrightarrow{\times 9} & \\
 \boxed{x} & & \boxed{x - 7} & & \boxed{9(x - 7)} \\
 & \xleftarrow{+7} & & \xleftarrow{\div 9} &
 \end{array}$$

(6)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 7} & & \xrightarrow{+8} & \\
 \boxed{x} & & \boxed{\frac{x}{7}} & & \boxed{\frac{x}{7} + 8} \\
 & \xleftarrow{\times 7} & & \xleftarrow{-8} &
 \end{array}$$

(7)

$$\begin{array}{ccccc}
 & \xrightarrow{+10} & & \xrightarrow{\div 7} & \\
 \boxed{x} & & \boxed{x + 10} & & \boxed{\frac{(x+10)}{7}} \\
 & \xleftarrow{-10} & & \xleftarrow{\times 7} &
 \end{array}$$

(8)

$$\begin{array}{ccccc}
 & \xrightarrow{+1} & & \xrightarrow{\div 1} & \\
 \boxed{x} & & \boxed{x + 1} & & \boxed{\frac{(x+1)}{1}} \\
 & \xleftarrow{-1} & & \xleftarrow{\times 1} &
 \end{array}$$

(9)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 3} & & \xrightarrow{-3} & \\
 \boxed{x} & & \boxed{3x} & & \boxed{3x - 3} \\
 & \xleftarrow{\div 3} & & \xleftarrow{+3} &
 \end{array}$$

(10)

$$\begin{array}{ccccc}
 & \xrightarrow{+3} & & \xrightarrow{\div 2} & \\
 \boxed{x} & & \boxed{x + 3} & & \boxed{\frac{(x+3)}{2}} \\
 & \xleftarrow{-3} & & \xleftarrow{\times 2} &
 \end{array}$$

(11)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 10} & & \xrightarrow{-9} & \\
 \boxed{x} & & \boxed{\frac{x}{10}} & & \boxed{\frac{x}{10} - 9} \\
 & \xleftarrow{\times 10} & & \xleftarrow{+9} &
 \end{array}$$

(12)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 8} & & \xrightarrow{+2} & \\
 \boxed{x} & & \boxed{\frac{x}{8}} & & \boxed{\frac{x}{8} + 2} \\
 & \xleftarrow{\times 8} & & \xleftarrow{-2} &
 \end{array}$$

(13)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 7} & & \xrightarrow{-4} & \\
 \boxed{x} & & \boxed{\frac{x}{7}} & & \boxed{\frac{x}{7} - 4} \\
 & \xleftarrow{\times 7} & & \xleftarrow{+4} &
 \end{array}$$

(14)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 4} & & \xrightarrow{-10} & \\
 \boxed{x} & & \boxed{\frac{x}{4}} & & \boxed{\frac{x}{4} - 10} \\
 & \xleftarrow{\times 4} & & \xleftarrow{+10} &
 \end{array}$$

(15)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 2} & & \xrightarrow{+9} & \\
 \boxed{x} & & \boxed{2x} & & \boxed{2x + 9} \\
 & \xleftarrow{\div 2} & & \xleftarrow{-9} &
 \end{array}$$

(16)

$$\begin{array}{ccccc}
 & \xrightarrow{-1} & & \xrightarrow{\div 2} & \\
 \boxed{x} & & \boxed{x-1} & & \boxed{\frac{(x-1)}{2}} \\
 & \xleftarrow{+1} & & \xleftarrow{\times 2} &
 \end{array}$$

(17)

$$\begin{array}{ccccc}
 & \xrightarrow{+10} & & \xrightarrow{\times 4} & \\
 \boxed{x} & & \boxed{x+10} & & \boxed{4(x+10)} \\
 & \xleftarrow{-10} & & \xleftarrow{\div 4} &
 \end{array}$$

(18)

$$\begin{array}{ccccc}
 & \xrightarrow{-8} & & \xrightarrow{\div 3} & \\
 \boxed{x} & & \boxed{x-8} & & \boxed{\frac{(x-8)}{3}} \\
 & \xleftarrow{+8} & & \xleftarrow{\times 3} &
 \end{array}$$

(19)

$$\begin{array}{ccccc}
 & \xrightarrow{-10} & & \xrightarrow{\times 8} & \\
 \boxed{x} & & \boxed{x-10} & & \boxed{8(x-10)} \\
 & \xleftarrow{+10} & & \xleftarrow{\div 8} &
 \end{array}$$

(20)

$$\begin{array}{ccccc}
 & \xrightarrow{-6} & & \xrightarrow{\times 8} & \\
 \boxed{x} & & \boxed{x-6} & & \boxed{8(x-6)} \\
 & \xleftarrow{+6} & & \xleftarrow{\div 8} &
 \end{array}$$

(21)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 9} & & \xrightarrow{-9} & \\
 \boxed{x} & & \boxed{9x} & & \boxed{9x-9} \\
 & \xleftarrow{\div 9} & & \xleftarrow{+9} &
 \end{array}$$

(22)

$$\begin{array}{ccccc}
 & \xrightarrow{+4} & & \xrightarrow{\times 9} & \\
 \boxed{x} & & \boxed{x+4} & & \boxed{9(x+4)} \\
 & \xleftarrow{-4} & & \xleftarrow{\div 9} &
 \end{array}$$

(23)

$$\begin{array}{ccccc}
 & \xrightarrow{-4} & & \xrightarrow{\div 10} & \\
 \boxed{x} & & \boxed{x-4} & & \boxed{\frac{(x-4)}{10}} \\
 & \xleftarrow{+4} & & \xleftarrow{\times 10} &
 \end{array}$$

(24)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 3} & & \xrightarrow{-2} & \\
 \boxed{x} & & \boxed{3x} & & \boxed{3x-2} \\
 & \xleftarrow{\div 3} & & \xleftarrow{+2} &
 \end{array}$$

(25)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 8} & & \xrightarrow{-2} & \\
 \boxed{x} & & \boxed{8x} & & \boxed{8x-2} \\
 & \xleftarrow{\div 8} & & \xleftarrow{+2} &
 \end{array}$$

(26)

$$\begin{array}{ccccc}
 & \xrightarrow{-5} & & \xrightarrow{\div 6} & \\
 \boxed{x} & & \boxed{x-5} & & \boxed{\frac{(x-5)}{6}} \\
 & \xleftarrow{+5} & & \xleftarrow{\times 6} &
 \end{array}$$

(27)

$$\begin{array}{ccccc}
 & \xrightarrow{+3} & & \xrightarrow{\div 10} & \\
 \boxed{x} & & \boxed{x+3} & & \boxed{\frac{(x+3)}{10}} \\
 & \xleftarrow{-3} & & \xleftarrow{\times 10} &
 \end{array}$$

(28)

$$\begin{array}{ccccc}
 & \xrightarrow{+8} & & \xrightarrow{\times 1} & \\
 \boxed{x} & & \boxed{x+8} & & \boxed{1(x+8)} \\
 & \xleftarrow{-8} & & \xleftarrow{\div 1} &
 \end{array}$$