

Name: _____

Date: _____

2-step backtracking: Answers

(1)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 3} & & \xrightarrow{+4} & \\
 \boxed{x} & & \boxed{\frac{x}{3}} & & \boxed{\frac{x}{3} + 4} \\
 & \xleftarrow{\times 3} & & \xleftarrow{-4} &
 \end{array}$$

(2)

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

(3)

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

(4)

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

(5)

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

(6)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 4} & & \xrightarrow{+5} & \\
 \boxed{x} & & \boxed{4x} & & \boxed{4x + 5} \\
 & \xleftarrow{\div 4} & & \xleftarrow{-5} &
 \end{array}$$

(7)

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

(8)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 9} & & \xrightarrow{+6} & \\
 \boxed{x} & & \boxed{9x} & & \boxed{9x + 6} \\
 & \xleftarrow{\div 9} & & \xleftarrow{-6} &
 \end{array}$$

(9)

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

(10)

$$\begin{array}{ccccc}
 & \xrightarrow{-7} & & \xrightarrow{\div 6} & \\
 \boxed{x} & & \boxed{x - 7} & & \boxed{\frac{(x-7)}{6}} \\
 & \xleftarrow{+7} & & \xleftarrow{\times 6} &
 \end{array}$$

(11)

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

(12)

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

(13)

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

(14)

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

(15)

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

(16)

$$\begin{array}{ccccc}
 & \xrightarrow{\times 6} & & \xrightarrow{-3} & \\
 \boxed{x} & & \boxed{6x} & & \boxed{6x - 3} \\
 & \xleftarrow{\div 6} & & \xleftarrow{+3} &
 \end{array}$$

(17)

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

(18)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 3} & & \xrightarrow{-6} & \\
 \boxed{x} & & \boxed{\frac{x}{3}} & & \boxed{\frac{x}{3} - 6} \\
 & \xleftarrow{\times 3} & & \xleftarrow{+6} &
 \end{array}$$

(19)

$$\begin{array}{ccccc}
 & \xrightarrow{+1} & & \xrightarrow{\times 7} & \\
 \boxed{x} & & \boxed{x + 1} & & \boxed{7(x + 1)} \\
 & \xleftarrow{-1} & & \xleftarrow{\div 7} &
 \end{array}$$

(20)

$$\begin{array}{ccccc}
 & \xrightarrow{-10} & & \xrightarrow{\div 5} & \\
 \boxed{x} & & \boxed{x - 10} & & \boxed{\frac{(x-10)}{5}} \\
 & \xleftarrow{+10} & & \xleftarrow{\times 5} &
 \end{array}$$

(21)

$$\begin{array}{ccccc}
 & \xrightarrow{+4} & & \xrightarrow{\times 8} & \\
 \boxed{x} & & \boxed{x + 4} & & \boxed{8(x + 4)} \\
 & \xleftarrow{-4} & & \xleftarrow{\div 8} &
 \end{array}$$

(22)

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

(23)

$$\begin{array}{ccccc}
 & \xrightarrow{\div 6} & & \xrightarrow{-7} & \\
 \boxed{x} & & \boxed{\frac{x}{6}} & & \boxed{\frac{x}{6} - 7} \\
 & \xleftarrow{\times 6} & & \xleftarrow{+7} &
 \end{array}$$

(24)

$$\begin{array}{ccccc}
 & \xrightarrow{+6} & & \xrightarrow{\times 3} & \\
 \boxed{x} & & \boxed{x + 6} & & \boxed{3(x + 6)} \\
 & \xleftarrow{-6} & & \xleftarrow{\div 3} &
 \end{array}$$

(25)

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

(26)

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

(27)

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

(28)

$$\begin{array}{ccccc}
 & \xrightarrow{+5} & & \xrightarrow{\div 8} & \\
 \boxed{x} & & \boxed{x + 5} & & \boxed{\frac{(x+5)}{8}} \\
 & \xleftarrow{-5} & & \xleftarrow{\times 8} &
 \end{array}$$