

Name: _____

Date: _____

2-step backtracking: Answers

(1)

x
=
90

 $\xrightarrow{\div 9}$

$\frac{x}{9}$
=
10

 $\xrightarrow{+2}$

$\frac{x}{9} + 2$
=
12

$\xleftarrow{\times 9}$ $\xleftarrow{-2}$

(6)

x
=
10

 $\xrightarrow{\times 6}$

$6x$
=
60

 $\xrightarrow{+9}$

$6x + 9$
=
69

$\xleftarrow{\div 6}$ $\xleftarrow{-9}$

(2)

x
=
3

 $\xrightarrow{\times 10}$

$10x$
=
30

 $\xrightarrow{+6}$

$10x + 6$
=
36

$\xleftarrow{\div 10}$ $\xleftarrow{-6}$

(7)

x
=
28

 $\xrightarrow{-4}$

$x - 4$
=
24

 $\xrightarrow{\div 8}$

$\frac{(x-4)}{8}$
=
3

$\xleftarrow{+4}$ $\xleftarrow{\times 8}$

(3)

x
=
18

 $\xrightarrow{+2}$

$x + 2$
=
20

 $\xrightarrow{\div 4}$

$\frac{(x+2)}{4}$
=
5

$\xleftarrow{-2}$ $\xleftarrow{\times 4}$

(8)

x
=
18

 $\xrightarrow{-10}$

$x - 10$
=
8

 $\xrightarrow{\times 6}$

$6(x - 10)$
=
48

$\xleftarrow{+10}$ $\xleftarrow{\div 6}$

(4)

x
=
7

 $\xrightarrow{+9}$

$x + 9$
=
16

 $\xrightarrow{\times 7}$

$7(x + 9)$
=
112

$\xleftarrow{-9}$ $\xleftarrow{\div 7}$

(9)

x
=
5

 $\xrightarrow{\times 5}$

$5x$
=
25

 $\xrightarrow{-7}$

$5x - 7$
=
18

$\xleftarrow{\div 5}$ $\xleftarrow{+7}$

(5)

x
=
10

 $\xrightarrow{\times 8}$

$8x$
=
80

 $\xrightarrow{-9}$

$8x - 9$
=
71

$\xleftarrow{\div 8}$ $\xleftarrow{+9}$

(10)

x
=
45

 $\xrightarrow{\div 5}$

$\frac{x}{5}$
=
9

 $\xrightarrow{+10}$

$\frac{x}{5} + 10$
=
19

$\xleftarrow{\times 5}$ $\xleftarrow{-10}$

(11)

x
=
17

 $\xrightarrow{-9}$

$x - 9$
=
8

 $\xrightarrow{\times 4}$

$4(x - 9)$
=
32

$\xleftarrow{+9} \quad \xleftarrow{\div 4}$

(16)

x
=
30

 $\xrightarrow{\div 2}$

$\frac{x}{2}$
=
15

 $\xrightarrow{-5}$

$\frac{x}{2} - 5$
=
10

$\xleftarrow{\times 2} \quad \xleftarrow{+5}$

(12)

x
=
7

 $\xrightarrow{-4}$

$x - 4$
=
3

 $\xrightarrow{\times 8}$

$8(x - 4)$
=
24

$\xleftarrow{+4} \quad \xleftarrow{\div 8}$

(17)

x
=
3

 $\xrightarrow{\times 8}$

$8x$
=
24

 $\xrightarrow{-3}$

$8x - 3$
=
21

$\xleftarrow{\div 8} \quad \xleftarrow{+3}$

(13)

x
=
3

 $\xrightarrow{+1}$

$x + 1$
=
4

 $\xrightarrow{\times 6}$

$6(x + 1)$
=
24

$\xleftarrow{-1} \quad \xleftarrow{\div 6}$

(18)

x
=
13

 $\xrightarrow{-5}$

$x - 5$
=
8

 $\xrightarrow{\div 4}$

$\frac{(x-5)}{4}$
=
2

$\xleftarrow{+5} \quad \xleftarrow{\times 4}$

(14)

x
=
0

 $\xrightarrow{+6}$

$x + 6$
=
6

 $\xrightarrow{\div 2}$

$\frac{(x+6)}{2}$
=
3

$\xleftarrow{-6} \quad \xleftarrow{\times 2}$

(19)

x
=
9

 $\xrightarrow{-4}$

$x - 4$
=
5

 $\xrightarrow{\times 1}$

$1(x - 4)$
=
5

$\xleftarrow{+4} \quad \xleftarrow{\div 1}$

(15)

x
=
7

 $\xrightarrow{-5}$

$x - 5$
=
2

 $\xrightarrow{\times 8}$

$8(x - 5)$
=
16

$\xleftarrow{+5} \quad \xleftarrow{\div 8}$

(20)

x
=
43

 $\xrightarrow{+5}$

$x + 5$
=
48

 $\xrightarrow{\div 6}$

$\frac{(x+5)}{6}$
=
8

$\xleftarrow{-5} \quad \xleftarrow{\times 6}$

(21)

x
=
41

$x - 5$
=
36

$\frac{(x-5)}{9}$
=
4

$\xrightarrow{-5} \quad \xrightarrow{\div 9}$
 $\xleftarrow{+5} \quad \xleftarrow{\times 9}$

(26)

x
=
5

$x + 1$
=
6

$6(x + 1)$
=
36

$\xrightarrow{+1} \quad \xrightarrow{\times 6}$
 $\xleftarrow{-1} \quad \xleftarrow{\div 6}$

(22)

x
=
6

$\frac{x}{6}$
=
1

$\frac{x}{6} + 9$
=
10

$\xrightarrow{\div 6} \quad \xrightarrow{+9}$
 $\xleftarrow{\times 6} \quad \xleftarrow{-9}$

(27)

x
=
7

$x + 4$
=
11

$10(x + 4)$
=
110

$\xrightarrow{+4} \quad \xrightarrow{\times 10}$
 $\xleftarrow{-4} \quad \xleftarrow{\div 10}$

(23)

x
=
30

$x + 2$
=
32

$\frac{(x+2)}{8}$
=
4

$\xrightarrow{+2} \quad \xrightarrow{\div 8}$
 $\xleftarrow{-2} \quad \xleftarrow{\times 8}$

(28)

x
=
5

$x + 8$
=
13

$4(x + 8)$
=
52

$\xrightarrow{+8} \quad \xrightarrow{\times 4}$
 $\xleftarrow{-8} \quad \xleftarrow{\div 4}$

(24)

x
=
10

$x - 6$
=
4

$7(x - 6)$
=
28

$\xrightarrow{-6} \quad \xrightarrow{\times 7}$
 $\xleftarrow{+6} \quad \xleftarrow{\div 7}$

(29)

x
=
6

$x + 3$
=
9

$5(x + 3)$
=
45

$\xrightarrow{+3} \quad \xrightarrow{\times 5}$
 $\xleftarrow{-3} \quad \xleftarrow{\div 5}$

(25)

x
=
5

$8x$
=
40

$8x + 2$
=
42

$\xrightarrow{\times 8} \quad \xrightarrow{+2}$
 $\xleftarrow{\div 8} \quad \xleftarrow{-2}$

(30)

x
=
10

$x - 7$
=
3

$7(x - 7)$
=
21

$\xrightarrow{-7} \quad \xrightarrow{\times 7}$
 $\xleftarrow{+7} \quad \xleftarrow{\div 7}$

(31)

x
=
11

$x - 5$
=
6

$\frac{(x-5)}{6}$
=
1

$\xrightarrow{-5} \quad \xrightarrow{\div 6}$
 $\xleftarrow{+5} \quad \xleftarrow{\times 6}$

(36)

x
=
90

$\frac{x}{9}$
=
10

$\frac{x}{9} + 5$
=
15

$\xrightarrow{\div 9} \quad \xrightarrow{+5}$
 $\xleftarrow{\times 9} \quad \xleftarrow{-5}$

(32)

x
=
72

$\frac{x}{9}$
=
8

$\frac{x}{9} + 7$
=
15

$\xrightarrow{\div 9} \quad \xrightarrow{+7}$
 $\xleftarrow{\times 9} \quad \xleftarrow{-7}$

(37)

x
=
11

$x - 10$
=
1

$2(x - 10)$
=
2

$\xrightarrow{-10} \quad \xrightarrow{\times 2}$
 $\xleftarrow{+10} \quad \xleftarrow{\div 2}$

(33)

x
=
6

$2x$
=
12

$2x - 2$
=
10

$\xrightarrow{\times 2} \quad \xrightarrow{-2}$
 $\xleftarrow{\div 2} \quad \xleftarrow{+2}$

(38)

x
=
91

$\frac{x}{7}$
=
13

$\frac{x}{7} - 9$
=
4

$\xrightarrow{\div 7} \quad \xrightarrow{-9}$
 $\xleftarrow{\times 7} \quad \xleftarrow{+9}$

(34)

x
=
70

$\frac{x}{10}$
=
7

$\frac{x}{10} + 3$
=
10

$\xrightarrow{\div 10} \quad \xrightarrow{+3}$
 $\xleftarrow{\times 10} \quad \xleftarrow{-3}$

(39)

x
=
6

$x + 9$
=
15

$8(x + 9)$
=
120

$\xrightarrow{+9} \quad \xrightarrow{\times 8}$
 $\xleftarrow{-9} \quad \xleftarrow{\div 8}$

(35)

x
=
78

$x - 6$
=
72

$\frac{(x-6)}{9}$
=
8

$\xrightarrow{-6} \quad \xrightarrow{\div 9}$
 $\xleftarrow{+6} \quad \xleftarrow{\times 9}$

(40)

x
=
36

$\frac{x}{6}$
=
6

$\frac{x}{6} - 3$
=
3

$\xrightarrow{\div 6} \quad \xrightarrow{-3}$
 $\xleftarrow{\times 6} \quad \xleftarrow{+3}$

(41)

x
=
25

 $\xrightarrow{\div 5}$

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

 $\xrightarrow{+4}$

$\frac{x}{5} + 4$
=
9

$\xleftarrow{\times 5} \quad \xleftarrow{-4}$

(46)

x
=
15

 $\xrightarrow{-9}$

$x - 9$
=
6

 $\xrightarrow{\times 5}$

$5(x - 9)$
=
30

$\xleftarrow{+9} \quad \xleftarrow{\div 5}$

(42)

x
=
18

 $\xrightarrow{\div 3}$

$\frac{x}{3}$
=
6

 $\xrightarrow{+1}$

$\frac{x}{3} + 1$
=
7

$\xleftarrow{\times 3} \quad \xleftarrow{-1}$

(47)

x
=
45

 $\xrightarrow{\div 9}$

$\frac{x}{9}$
=
5

 $\xrightarrow{+10}$

$\frac{x}{9} + 10$
=
15

$\xleftarrow{\times 9} \quad \xleftarrow{-10}$

(43)

x
=
23

 $\xrightarrow{+1}$

$x + 1$
=
24

 $\xrightarrow{\div 8}$

$\frac{(x+1)}{8}$
=
3

$\xleftarrow{-1} \quad \xleftarrow{\times 8}$

(48)

x
=
180

 $\xrightarrow{\div 10}$

$\frac{x}{10}$
=
18

 $\xrightarrow{-8}$

$\frac{x}{10} - 8$
=
10

$\xleftarrow{\times 10} \quad \xleftarrow{+8}$

(44)

x
=
8

 $\xrightarrow{\times 10}$

$10x$
=
80

 $\xrightarrow{+10}$

$10x + 10$
=
90

$\xleftarrow{\div 10} \quad \xleftarrow{-10}$

(49)

x
=
26

 $\xrightarrow{+6}$

$x + 6$
=
32

 $\xrightarrow{\div 8}$

$\frac{(x+6)}{8}$
=
4

$\xleftarrow{-6} \quad \xleftarrow{\times 8}$

(45)

x
=
6

 $\xrightarrow{\times 7}$

$7x$
=
42

 $\xrightarrow{-4}$

$7x - 4$
=
38

$\xleftarrow{\div 7} \quad \xleftarrow{+4}$

(50)

x
=
11

 $\xrightarrow{-8}$

$x - 8$
=
3

 $\xrightarrow{\times 5}$

$5(x - 8)$
=
15

$\xleftarrow{+8} \quad \xleftarrow{\div 5}$

(51)

x
=
7

$x + 9$
=
16

$5(x + 9)$
=
80

$\xrightarrow{+9} \quad \xrightarrow{\times 5}$
 $\xleftarrow{-9} \quad \xleftarrow{\div 5}$

(56)

x
=
40

$\frac{x}{8}$
=
5

$\frac{x}{8} + 6$
=
11

$\xrightarrow{\div 8} \quad \xrightarrow{+6}$
 $\xleftarrow{\times 8} \quad \xleftarrow{-6}$

(52)

x
=
49

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

$\frac{x}{7} + 7$
=
14

$\xrightarrow{\div 7} \quad \xrightarrow{+7}$
 $\xleftarrow{\times 7} \quad \xleftarrow{-7}$

(57)

x
=
7

$x - 2$
=
5

$2(x - 2)$
=
10

$\xrightarrow{-2} \quad \xrightarrow{\times 2}$
 $\xleftarrow{+2} \quad \xleftarrow{\div 2}$

(53)

x
=
8

$2x$
=
16

$2x - 6$
=
10

$\xrightarrow{\times 2} \quad \xrightarrow{-6}$
 $\xleftarrow{\div 2} \quad \xleftarrow{+6}$

(58)

x
=
2

$6x$
=
12

$6x + 6$
=
18

$\xrightarrow{\times 6} \quad \xrightarrow{+6}$
 $\xleftarrow{\div 6} \quad \xleftarrow{-6}$

(54)

x
=
72

$x - 9$
=
63

$\frac{(x-9)}{9}$
=
7

$\xrightarrow{-9} \quad \xrightarrow{\div 9}$
 $\xleftarrow{+9} \quad \xleftarrow{\times 9}$

(59)

x
=
5

$7x$
=
35

$7x - 10$
=
25

$\xrightarrow{\times 7} \quad \xrightarrow{-10}$
 $\xleftarrow{\div 7} \quad \xleftarrow{+10}$

(55)

x
=
10

$\frac{x}{5}$
=
2

$\frac{x}{5} + 3$
=
5

$\xrightarrow{\div 5} \quad \xrightarrow{+3}$
 $\xleftarrow{\times 5} \quad \xleftarrow{-3}$

(60)

x
=
12

$x - 2$
=
10

$4(x - 2)$
=
40

$\xrightarrow{-2} \quad \xrightarrow{\times 4}$
 $\xleftarrow{+2} \quad \xleftarrow{\div 4}$

(61)

x
=
10

 $\xrightarrow{\times 10}$

$10x$
=
100

 $\xrightarrow{-8}$

$10x - 8$
=
92

$\xleftarrow{\div 10} \quad \xleftarrow{+8}$

(66)

x
=
2

 $\xrightarrow{\times 8}$

$8x$
=
16

 $\xrightarrow{+4}$

$8x + 4$
=
20

$\xleftarrow{\div 8} \quad \xleftarrow{-4}$

(62)

x
=
10

 $\xrightarrow{+1}$

$x + 1$
=
11

 $\xrightarrow{\times 7}$

$7(x + 1)$
=
77

$\xleftarrow{-1} \quad \xleftarrow{\div 7}$

(67)

x
=
16

 $\xrightarrow{-9}$

$x - 9$
=
7

 $\xrightarrow{\times 5}$

$5(x - 9)$
=
35

$\xleftarrow{+9} \quad \xleftarrow{\div 5}$

(63)

x
=
9

 $\xrightarrow{\times 6}$

$6x$
=
54

 $\xrightarrow{-8}$

$6x - 8$
=
46

$\xleftarrow{\div 6} \quad \xleftarrow{+8}$

(68)

x
=
3

 $\xrightarrow{-2}$

$x - 2$
=
1

 $\xrightarrow{\div 1}$

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

$\xleftarrow{+2} \quad \xleftarrow{\times 1}$

(64)

x
=
30

 $\xrightarrow{\div 3}$

$\frac{x}{3}$
=
10

 $\xrightarrow{-2}$

$\frac{x}{3} - 2$
=
8

$\xleftarrow{\times 3} \quad \xleftarrow{+2}$

(69)

x
=
7

 $\xrightarrow{\times 2}$

$2x$
=
14

 $\xrightarrow{+10}$

$2x + 10$
=
24

$\xleftarrow{\div 2} \quad \xleftarrow{-10}$

(65)

x
=
10

 $\xrightarrow{\times 5}$

$5x$
=
50

 $\xrightarrow{-9}$

$5x - 9$
=
41

$\xleftarrow{\div 5} \quad \xleftarrow{+9}$

(70)

x
=
17

 $\xrightarrow{-9}$

$x - 9$
=
8

 $\xrightarrow{\times 3}$

$3(x - 9)$
=
24

$\xleftarrow{+9} \quad \xleftarrow{\div 3}$

(71)

x
=
39

 $\xrightarrow{-3}$

$x - 3$
=
36

 $\xrightarrow{\div 6}$

$\frac{(x-3)}{6}$
=
6

$\xleftarrow{+3} \quad \xleftarrow{\times 6}$

(76)

x
=
8

 $\xrightarrow{\times 5}$

$5x$
=
40

 $\xrightarrow{-2}$

$5x - 2$
=
38

$\xleftarrow{\div 5} \quad \xleftarrow{+2}$

(72)

x
=
13

 $\xrightarrow{-4}$

$x - 4$
=
9

 $\xrightarrow{\times 4}$

$4(x - 4)$
=
36

$\xleftarrow{+4} \quad \xleftarrow{\div 4}$

(77)

x
=
12

 $\xrightarrow{\div 4}$

$\frac{x}{4}$
=
3

 $\xrightarrow{+3}$

$\frac{x}{4} + 3$
=
6

$\xleftarrow{\times 4} \quad \xleftarrow{-3}$

(73)

x
=
3

 $\xrightarrow{+9}$

$x + 9$
=
12

 $\xrightarrow{\div 2}$

$\frac{(x+9)}{2}$
=
6

$\xleftarrow{-9} \quad \xleftarrow{\times 2}$

(78)

x
=
18

 $\xrightarrow{\div 3}$

$\frac{x}{3}$
=
6

 $\xrightarrow{+3}$

$\frac{x}{3} + 3$
=
9

$\xleftarrow{\times 3} \quad \xleftarrow{-3}$

(74)

x
=
4

 $\xrightarrow{\div 2}$

$\frac{x}{2}$
=
2

 $\xrightarrow{+6}$

$\frac{x}{2} + 6$
=
8

$\xleftarrow{\times 2} \quad \xleftarrow{-6}$

(79)

x
=
1

 $\xrightarrow{+2}$

$x + 2$
=
3

 $\xrightarrow{\times 2}$

$2(x + 2)$
=
6

$\xleftarrow{-2} \quad \xleftarrow{\div 2}$

(75)

x
=
11

 $\xrightarrow{+7}$

$x + 7$
=
18

 $\xrightarrow{\div 9}$

$\frac{(x+7)}{9}$
=
2

$\xleftarrow{-7} \quad \xleftarrow{\times 9}$

(80)

x
=
14

 $\xrightarrow{-7}$

$x - 7$
=
7

 $\xrightarrow{\times 7}$

$7(x - 7)$
=
49

$\xleftarrow{+7} \quad \xleftarrow{\div 7}$