

4個の数字で式を作る

ルール、ファイルの説明

1. 指定された4個の数字と、 $+$ $-$ \times \div と()を用いて、1から10までの答えをもつ計算式を作ります。
2. 4個の数字を使っていれば、その順番は自由です。
3. 数字は、並べて二桁、三桁にして使っても良いこととします。(例 $41 - 32 = 9$)
4. $+$ $-$ \times \div と()は、計算の式になっている限り同じものを何度も使っても良い事とします。
5. 以下のページにある解答例はあくまで一部です。
6. 以下にある数字の組はすべて、並べて二けたにして使わないと答えられないものを含みます。

数字の組・一覧

1 1 1 8	1 1 1 9	1 1 2 2	1 1 2 8
1 1 2 9	1 1 4 7	1 1 4 8	1 1 4 9
1 1 5 7	1 1 5 8	1 1 5 9	1 1 6 7
1 1 6 8	1 1 8 9	1 3 7 7	1 3 7 8
1 3 8 9	1 4 7 8	1 5 5 6	1 5 5 8
1 5 6 9	1 5 7 8	1 6 6 9	1 6 7 9
1 6 8 9	1 7 7 8	1 7 8 8	2 2 5 7
3 4 4 4	3 4 5 7	3 4 5 9	3 5 6 8
3 5 7 7	3 5 8 8	3 6 6 6	3 6 6 7
3 6 6 9	3 6 8 8	3 7 7 7	3 7 7 9
4 4 4 4	4 4 5 9	4 5 5 5	4 5 6 9
4 5 9 9	4 6 6 6	4 6 6 7	4 6 7 8
4 6 9 9	4 7 7 8	4 7 8 8	5 5 5 7
5 5 6 9	5 5 7 7	5 6 7 8	5 7 7 8
5 7 8 9	6 7 8 8	6 8 8 9	7 7 7 7

解答例

1 1 1 8

$1 + 8 \times (1 - 1) = 1$	$11 - (1 + 8) = 2$ $11 - 1 - 8 = 2$	$1 \times (11 - 8) = 3$ $1 \times 11 - 8 = 3$	$1 + 11 - 8 = 4$ $1 \div (1 + 1) \times 8 = 4$	$1 + 8 \div (1 + 1) = 5$ $8 - (1 + 1 + 1) = 5$
$1 \times (8 - (1 + 1)) = 6$ $1 \times (8 - 1 - 1) = 6$	$1 \times 1 \times (8 - 1) = 7$ $1 \times (1 \times 8 - 1) = 7$ $1 \times 1 \times 8 - 1 = 7$	$1 \times 1 \times 1 \times 8 = 8$ $1 \div (1 \times 1 \div 8) = 8$ $1 \times (1 - 1 + 8) = 8$	$1 \times 1 \times (1 + 8) = 9$ $1 \times (1 + 1 \times 8) = 9$ $1 + 1 \times 1 \times 8 = 9$	$1 \times (1 + 1 + 8) = 10$ $1 + 1 \times (1 + 8) = 10$ $1 + 1 + 1 \times 8 = 10$

1 1 1 9

$1 + 9 \times (1 - 1) = 1$ $11 - (1 + 9) = 1$ $11 - 1 - 9 = 1$	$1 \times (11 - 9) = 2$ $1 \times 11 - 9 = 2$	$1 + 11 - 9 = 3$	$(9 - 1) \div (1 + 1) = 4$	$(1 + 9) \div (1 + 1) = 5$
$9 - (1 + 1 + 1) = 6$	$1 \times (9 - (1 + 1)) = 7$ $1 \times (9 - 1 - 1) = 7$	$1 \times 1 \times (9 - 1) = 8$ $1 \times (1 \times 9 - 1) = 8$ $1 \times 1 \times 9 - 1 = 8$	$1 \times 1 \times 1 \times 9 = 9$ $1 \div (1 \times 1 \div 9) = 9$ $1 \times (1 - 1 + 9) = 9$	$1 \times 1 \times (1 + 9) = 10$ $1 \times (1 + 1 \times 9) = 10$ $1 + 1 \times 1 \times 9 = 10$

1 1 2 2

$1 \times (1 + 2 - 2) = 1$ $1 + 1 \times (2 - 2) = 1$ $1 + 1 - 2 \div 2 = 1$	$1 + 1 + 2 - 2 = 2$ $1 \times (1 + 2 \div 2) = 2$ $1 + 1 \times 2 \div 2 = 2$	$1 + 1 + 2 \div 2 = 3$ $2 \times (1 + 1 \div 2) = 3$	$1 \times 1 \times (2 + 2) = 4$ $1 \times 1 \times 2 \times 2 = 4$ $1 \times (1 \times 2 + 2) = 4$	$1 \times (1 + 2 + 2) = 5$ $1 + 1 \times (2 + 2) = 5$ $1 \times (1 + 2 \times 2) = 5$
$1 + 1 + 2 + 2 = 6$ $1 + 1 + 2 \times 2 = 6$	$1 + 2 \times (1 + 2) = 7$ $1 + 12 \div 2 = 7$ $11 - (2 + 2) = 7$	$2 \times (1 + 1 + 2) = 8$ $(1 + 1) \times (2 + 2) = 8$ $(1 + 1) \times 2 \times 2 = 8$	$(1 + 2) \times (1 + 2) = 9$ $12 - (1 + 2) = 9$ $12 - 1 - 2 = 9$	$1 \times (12 - 2) = 10$ $1 \times 12 - 2 = 10$ $11 - 2 \div 2 = 10$

1 1 2 8

$11 - (2 + 8) = 1$ $11 - 2 - 8 = 1$	$8 \times (1 - 1) + 2 = 2$	$12 - (1 + 8) = 3$ $12 - 1 - 8 = 3$	$1 \div (1 \times 2 \div 8) = 4$ $1 \times 1 \div 2 \times 8 = 4$ $1 \times (12 - 8) = 4$	$1 + 1 \div 2 \times 8 = 5$ $1 + 12 - 8 = 5$
$1 \times 1 \times (8 - 2) = 6$ $1 + 1 + 8 \div 2 = 6$ $1 \times (1 \times 8 - 2) = 6$	$1 \times (1 + 8 - 2) = 7$ $1 + 1 \times (8 - 2) = 7$	$1 + 1 - 2 + 8 = 8$ $(1 + 1) \div 2 \times 8 = 8$ $2 \times (1 - 1) + 8 = 8$	$(1 + 1) \div 2 + 8 = 9$ $1 \times 18 \div 2 = 9$	$1 \times 1 \times (2 + 8) = 10$ $1 \times (1 \times 2 + 8) = 10$ $1 \times 1 \times 2 + 8 = 10$

1 1 2 9

$11 \div (2 + 9) = 1$ $(11 - 2) \div 9 = 1$	$9 \times (1 - 1) + 2 = 2$ $12 - (1 + 9) = 2$ $12 - 1 - 9 = 2$	$1 \times (12 - 9) = 3$ $1 \div (1 + 2) \times 9 = 3$ $1 \times 12 - 9 = 3$	$1 + 12 - 9 = 4$	$1 \times (1 + 9) \div 2 = 5$ $(1 + 1 \times 9) \div 2 = 5$
$1 + (1 + 9) \div 2 = 6$ $1 \times (9 - (1 + 2)) = 6$	$1 \times 1 \times (9 - 2) = 7$ $1 \times (1 \times 9 - 2) = 7$ $1 \times 1 \times 9 - 2 = 7$	$1 \times (1 + 9 - 2) = 8$ $1 + 1 \times (9 - 2) = 8$	$1 + 1 - 2 + 9 = 9$ $(1 + 1) \div 2 \times 9 = 9$ $2 \times (1 - 1) + 9 = 9$	$(1 + 1) \div 2 + 9 = 10$ $(1 + 19) \div 2 = 10$

1 1 4 7

$11 \div (4 + 7) = 1$ $4 \times (1 + 1) - 7 = 1$ $(11 - 4) \div 7 = 1$	$1 \times 14 \div 7 = 2$ $1 \times (1 + 7) \div 4 = 2$	$1 + 14 \div 7 = 3$ $1 \times 1 \times (7 - 4) = 3$ $1 + (1 + 7) \div 4 = 3$	$1 + 12 - 9 = 4$	$1 + 1 + 7 - 4 = 5$
$(1 + 1) \times (7 - 4) = 6$ $(1 + 41) \div 7 = 6$ $14 - (1 + 7) = 6$	$1 \times (14 - 7) = 7$ $1 \times 14 - 7 = 7$ $4 \times (1 - 1) + 7 = 7$	$1 + 14 - 7 = 8$	$4 - (1 + 1) + 7 = 9$ $4 \div (1 + 1) + 7 = 9$ $4 - 1 - 1 + 7 = 9$	$7 \times (1 + 1) - 4 = 10$ $1 \times (4 - 1 + 7) = 10$

1 1 4 8

$(1 + 1) \times 4 \div 8 = 1$ $4 \times (1 + 1) \div 8 = 1$	$1 \div (1 - 4 \div 8) = 2$ $1 \div (1 \times 4 \div 8) = 2$ $1 \times 1 \div 4 \times 8 = 2$	$1 + 1 \div 4 \times 8 = 3$ $1 \times (1 + 8 \div 4) = 3$	$(1 + 1) \div 4 \times 8 = 4$ $1 \times 1 \times (8 - 4) = 4$ $1 + 1 + 8 \div 4 = 4$	$1 \times (1 + 8 - 4) = 5$ $1 + 1 \times (8 - 4) = 5$
$1 \times (14 - 8) = 6$ $8 \times (1 - 1 \div 4) = 6$ $1 \times 14 - 8 = 6$	$1 + 14 - 8 = 7$	$4 \times (1 - 1) + 8 = 8$ $(1 + 1) \times (8 - 4) = 8$	$11 - 8 \div 4 = 9$	$8 \times (1 + 1 \div 4) = 10$ $4 - (1 + 1) + 8 = 10$

1 1 4 9

$9 - 4 \times (1 + 1) = 1$ $(9 - 1) \div 4 - 1 = 1$	$1 \div 4 \times (9 - 1) = 2$ $1 \times (9 - 1) \div 4 = 2$	$1 \div (4 - 1) \times 9 = 3$ $1 + (9 - 1) \div 4 = 3$	$9 \times (1 - 1) + 4 = 4$ $14 - (1 + 9) = 4$ $14 - 1 - 9 = 4$	$1 \times (14 - 9) = 5$ $1 \times 14 - 9 = 5$ $1 \times 1 \times (9 - 4) = 5$
$1 + 14 - 9 = 6$	$1 + 1 + 9 - 4 = 7$	$4 \times (11 - 9) = 8$	$4 \times (1 - 1) + 9 = 9$	$(1 + 1) \times (9 - 4) = 10$ $(9 - 4) \times (1 + 1) = 10$

1 1 5 7

$(1+1+5) \div 7 = 1$ $(1+1) \div (7-5) = 1$	$1 \times 1 \times (7-5) = 2$ $1 \times (1 \times 7-5) = 2$ $1 \times 1 \times 7-5 = 2$	$5 \times (1+1)-7 = 3$ $1 \times (1+7-5) = 3$ $1+1 \times (7-5) = 3$	$1+1+7-5 = 4$	$7 \times (1-1)+5 = 5$
$(5+7) \div (1+1) = 6$	$5 \times (1-1)+7 = 7$ $15-(1+7) = 7$ $15-1-7 = 7$	$1 \times (15-7) = 8$ $1 \times 15-7 = 8$	$1+15-7 = 9$	$5-(1+1)+7 = 10$ $5-1-1+7 = 10$

1 1 5 8

$5-8 \div (1+1) = 1$ $8-(1+1+5) = 1$	$(1+15) \div 8 = 2$ $5 \times (1+1)-8 = 2$	$1 \times 1 \times (8-5) = 3$ $1 \times (1 \times 8-5) = 3$ $1 \times 1 \times 8-5 = 3$	$1 \times (1+8-5) = 4$ $1+1 \times (8-5) = 4$	$1+1+8-5 = 5$
$(1+1) \times (8-5) = 6$ $15-(1+8) = 6$ $15-1-8 = 6$	$1 \times (15-8) = 7$ $1 \times 15-8 = 7$	$1+15-8 = 8$ $5 \times (1-1)+8 = 8$	$5+8 \div (1+1) = 9$	$8 \div (1-1 \div 5) = 10$

1 1 5 9

$5 \times (1+1)-9 = 1$ $(1+9) \div 5-1 = 1$	$1 \times (1+9) \div 5 = 2$ $(1+1 \times 9) \div 5 = 2$	$1+(1+9) \div 5 = 3$ $1 \times (9-(1+5)) = 3$	$1 \times 1 \times (9-5) = 4$ $1 \times (1 \times 9-5) = 4$ $1 \times 1 \times 9-5 = 4$	$1 \times (1+9-5) = 5$ $1+1 \times (9-5) = 5$
$1 \times (15-9) = 6$ $1 \times 15-9 = 6$ $1+1+9-5 = 6$	$1+15-9 = 7$	$(1+1) \times (9-5) = 8$ $(9-5) \times (1+1) = 8$	$5 \times (1-1)+9 = 9$	$5 \times (11-9) = 10$

1 1 6 7

$1+1+6-7 = 1$ $1 \times (1+6) \div 7 = 1$	$1+(1+6) \div 7 = 2$ $1 \times (1+7-6) = 2$ $1+1 \times (7-6) = 2$	$1+1+7-6 = 3$	$7-6 \div (1+1) = 4$	$6 \times (1+1)-7 = 5$
$7 \times (1-1)+6 = 6$ $1 \div (7 \div 6-1) = 6$	$1 \div (1-6 \div 7) = 7$ $6 \times (1-1)+7 = 7$	$7 \times (1+1)-6 = 8$ $16-(1+7) = 8$ $16-1-7 = 8$	$1 \times (16-7) = 9$ $1 \times 16-7 = 9$	$1+16-7 = 10$

1 1 6 8

$(1+1+6) \div 8 = 1$ $(1+1) \div (8-6) = 1$	$1 \times 16 \div 8 = 2$ $1 \times 1 \times (8-6) = 2$	$1+16 \div 8 = 3$ $1 \times (1+8-6) = 3$ $1+1 \times (8-6) = 3$	$1 \div (1-6 \div 8) = 4$ $6 \times (1+1)-8 = 4$ $1+1+8-6 = 4$	$8-6 \div (1+1) = 5$
$8 \times (1-1)+6 = 6$	$16-(1+8) = 7$ $16-1-8 = 7$	$1 \times (16-8) = 8$ $1 \times 16-8 = 8$ $6 \times (1-1)+8 = 8$	$1+16-8 = 9$	$8 \times (1+1)-6 = 10$ $6+8 \div (1+1) = 10$

1 1 8 9

$1+1+8-9 = 1$ $1 \times (1+8) \div 9 = 1$	$1+(1+8) \div 9 = 2$ $1 \times 18 \div 9 = 2$	$1+18 \div 9 = 3$ $1+1+9-8 = 3$	$8 \div (11-9) = 4$	$9-8 \div (1+1) = 5$
$8+9-11 = 6$	$8 \times (1+1)-9 = 7$	$9 \times (1-1)+8 = 8$ $18-(1+9) = 8$ $18-1-9 = 8$	$1 \div (1-8 \div 9) = 9$ $1 \times (18-9) = 9$ $1 \times 18-9 = 9$	$1+18-9 = 10$

1 3 7 7

$1+3 \times (7-7) = 1$ $3-(1+7 \div 7) = 1$	$1 \times (3-7 \div 7) = 2$ $1 \times 3-7 \div 7 = 2$ $(17-3) \div 7 = 2$	$1 \times (3+7-7) = 3$ $1+3-7 \div 7 = 3$ $1 \times 3 \times 7 \div 7 = 3$	$1+3+7-7 = 4$ $1 \times (3+7 \div 7) = 4$ $1+3 \times 7 \div 7 = 4$	$1+3+7 \div 7 = 5$
$3 \times (1+7 \div 7) = 6$	$17-(3+7) = 7$ $17-3-7 = 7$	$(17+7) \div 3 = 8$	$(7-1) \div 3+7 = 9$	$7 \times (1+3 \div 7) = 10$

1 3 7 8

$3-1+7-8 = 1$ $3-(1+8-7) = 1$	$1 \times (3+7-8) = 2$ $1 \times 3+7-8 = 2$	$1+3+7-8 = 3$	$1 \times (3+8-7) = 4$ $1+3 \times (8-7) = 4$	$1 \div 3 \times (7+8) = 5$ $1+3+8-7 = 5$
$17-(3+8) = 6$ $17-3-8 = 6$ $1+(7+8) \div 3 = 6$	$3 \times 8-17 = 7$	$18-(3+7) = 8$ $18-3-7 = 8$	$8 \times (3-1)-7 = 9$ $(73-1) \div 8 = 9$ $7+8 \div (1+3) = 9$	$(1+8) \div 3+7 = 10$ $3 \times (7-1)-8 = 10$

1 3 8 9

$$\begin{array}{l} 3 - 18 \div 9 = 1 \\ 3 - 1 + 8 - 9 = 1 \\ 3 - (1 + 9 - 8) = 1 \end{array}$$

$$\begin{array}{l} 18 - (3 + 9) = 6 \\ 18 \times 3 \div 9 = 6 \\ 18 - 3 - 9 = 6 \end{array}$$

$$\begin{array}{l} 1 \times (3 + 8 - 9) = 2 \\ 1 \times 3 + 8 - 9 = 2 \end{array}$$

$$\begin{array}{l} 8 \times (3 - 1) - 9 = 7 \\ 9 - 8 \div (1 + 3) = 7 \end{array}$$

$$1 + 3 + 8 - 9 = 3$$

$$\begin{array}{l} 19 - (3 + 8) = 8 \\ 19 - 3 - 8 = 8 \end{array}$$

$$\begin{array}{l} 1 \times (3 + 9 - 8) = 4 \\ 1 + 3 \times (9 - 8) = 4 \end{array}$$

$$\begin{array}{l} (18 + 9) \div 3 = 9 \\ 3 \times 9 - 18 = 9 \end{array}$$

$$1 + 3 + 9 - 8 = 5$$

$$\begin{array}{l} 9 \times (3 - 1) - 8 = 10 \\ 8 - 1 + 9 \div 3 = 10 \\ 8 + 9 \div 3 - 1 = 10 \end{array}$$

1 4 7 8

$$\begin{array}{l} 7 + 8 - 14 = 1 \\ (1 + 7) \div (8 - 4) = 2 \\ (18 - 4) \div 7 = 2 \\ 4 - 1 + 7 - 8 = 2 \end{array}$$

$$\begin{array}{l} (1 + 47) \div 8 = 6 \\ 1 + 4 + 8 - 7 = 6 \end{array}$$

$$\begin{array}{l} (1 + 7) \div (8 - 4) = 2 \\ (18 - 4) \div 7 = 2 \end{array}$$

$$4 - 1 + 7 - 8 = 2$$

$$\begin{array}{l} 1 \times (4 + 7 - 8) = 3 \\ 1 \times 4 + 7 - 8 = 3 \end{array}$$

$$19 - (3 + 8) = 8$$

$$1 + 4 + 7 - 8 = 4$$

$$3 \times 9 - 18 = 9$$

$$1 \times (4 + 8 - 7) = 5$$

$$1 + 4 \times (8 - 7) = 5$$

$$\begin{array}{l} 14 \div 7 + 8 = 10 \\ (1 + 7) \div 4 + 8 = 10 \\ 1 + 7 + 8 \div 4 = 10 \end{array}$$

1 5 5 6

$$\begin{array}{l} 1 + 6 \times (5 - 5) = 1 \\ (5 - 1 + 6) \div 5 = 2 \\ (5 + 5) \div (6 - 1) = 2 \end{array}$$

$$\begin{array}{l} 1 \times (5 - 5 + 6) = 6 \\ 1 \times 5 \div 5 \times 6 = 6 \end{array}$$

$$\begin{array}{l} 5 \div 15 \times 6 = 2 \\ (5 - 1 + 6) \div 5 = 2 \\ (5 + 5) \div (6 - 1) = 2 \end{array}$$

$$(5 - 1 + 6) \div 5 = 2$$

$$\begin{array}{l} 5 - 1 + 5 - 6 = 3 \\ 5 - (1 + 6 - 5) = 3 \end{array}$$

$$19 - (3 + 8) = 8$$

$$\begin{array}{l} 1 \times (5 + 5 - 6) = 4 \\ 15 - (5 + 6) = 4 \end{array}$$

$$3 \times 9 - 18 = 9$$

$$\begin{array}{l} 1 + 5 + 5 - 6 = 5 \\ (1 + 5) \times 5 \div 6 = 5 \end{array}$$

$$5 \times (1 + 6 - 5) = 10$$

1 5 5 8

$$\begin{array}{l} 1 + 8 \times (5 - 5) = 1 \\ 5 - 1 + 5 - 8 = 1 \end{array}$$

$$\begin{array}{l} 8 - (1 + 5 \div 5) = 6 \\ 8 - 1 - 5 \div 5 = 6 \end{array}$$

$$\begin{array}{l} 1 \times (5 + 5 - 8) = 2 \\ 15 - (5 + 8) = 2 \end{array}$$

$$\begin{array}{l} (1 + 55) \div 8 = 7 \\ 1 \times (8 - 5 \div 5) = 7 \\ 1 \times 8 - 5 \div 5 = 7 \end{array}$$

$$\begin{array}{l} 1 + 5 + 5 - 8 = 3 \\ 1 + 5 \div 5 + 6 = 8 \end{array}$$

$$\begin{array}{l} 1 \times (5 - 5 + 8) = 8 \\ 1 \times 5 \div 5 \times 8 = 8 \end{array}$$

$$\begin{array}{l} 8 \div (1 + 5 \div 5) = 4 \\ 15 \div 5 + 6 = 9 \end{array}$$

$$\begin{array}{l} (51 - 6) \div 5 = 9 \\ 5 \times 5 - 16 = 9 \end{array}$$

$$\begin{array}{l} 15 \div (8 - 5) = 5 \\ 8 - 15 \div 5 = 5 \end{array}$$

$$1 + 5 \div 5 + 8 = 10$$

1 5 6 9

$$\begin{array}{l} 15 \div (6 + 9) = 1 \\ (15 - 6) \div 9 = 1 \end{array}$$

$$\begin{array}{l} (5 - 1) \div 6 \times 9 = 6 \\ 9 \times (5 - 1) \div 6 = 6 \end{array}$$

$$\begin{array}{l} 1 \times (5 + 6 - 9) = 2 \\ 1 \times 5 + 6 - 9 = 2 \end{array}$$

$$\begin{array}{l} 5 - 1 + 9 - 6 = 7 \\ (51 - 9) \div 6 = 7 \end{array}$$

$$\begin{array}{l} 1 + 5 + 6 - 9 = 3 \\ 1 \div 5 \times (6 + 9) = 3 \end{array}$$

$$1 \times (5 + 9 - 6) = 8$$

$$\begin{array}{l} (1 + 5) \times 6 \div 9 = 4 \\ 6 \times (1 + 5) \div 9 = 4 \end{array}$$

$$\begin{array}{l} 1 + 5 - 6 + 9 = 9 \\ (1 + 5) \div 6 \times 9 = 9 \end{array}$$

$$\begin{array}{l} 15 \div (9 - 6) = 5 \\ (16 + 9) \div 5 = 5 \end{array}$$

$$\begin{array}{l} 15 \times 6 \div 9 = 10 \\ (1 + 5) \div 6 + 9 = 10 \end{array}$$

1 5 7 8

$$\begin{array}{l} 15 \div (7 + 8) = 1 \\ (15 - 7) \div 8 = 1 \end{array}$$

$$\begin{array}{l} 1 \times (5 + 8 - 7) = 6 \\ 1 + 5 \times (8 - 7) = 6 \end{array}$$

$$\begin{array}{l} (1 + 5 + 8) \div 7 = 2 \\ 1 + 5 + 8 - 7 = 7 \end{array}$$

$$\begin{array}{l} 8 \times (7 - (1 + 5)) = 8 \\ 8 \times (7 - 1 - 5) = 8 \end{array}$$

$$\begin{array}{l} 1 \div 5 \times (7 + 8) = 3 \\ 1 \times (7 + 8) \div 5 = 3 \end{array}$$

$$\begin{array}{l} 8 \times (7 - (1 + 5)) = 8 \\ 8 \times (7 - 1 - 5) = 8 \end{array}$$

$$\begin{array}{l} 1 \times (5 + 7 - 8) = 4 \\ 1 \times 5 + 7 - 8 = 4 \end{array}$$

$$\begin{array}{l} 18 \div (7 - 5) = 9 \\ 7 - (1 + 5) + 8 = 9 \\ 7 - 1 - 5 + 8 = 9 \end{array}$$

$$\begin{array}{l} 1 + 5 + 7 - 8 = 5 \\ 1 \times 7 - 5 + 8 = 10 \end{array}$$

$$1 + 5 \div 5 + 8 = 10$$

1 6 6 9

$$\begin{array}{l} 1 + 9 \times (6 - 6) = 1 \\ 16 - (6 + 9) = 1 \\ 16 - 6 - 9 = 1 \end{array}$$

$$96 \div 16 = 6$$

$$\begin{array}{l} 1 \times 6 \div (9 - 6) = 2 \\ 6 \times (1 - 6 \div 9) = 2 \end{array}$$

$$\begin{array}{l} 19 - (6 + 6) = 7 \\ 19 - 6 - 6 = 7 \\ 61 - 6 \times 9 = 7 \end{array}$$

$$\begin{array}{l} 1 \times (6 + 6 - 9) = 3 \\ 1 \times 6 + 6 - 9 = 3 \end{array}$$

$$\begin{array}{l} 1 \times (9 - 6 \div 6) = 8 \\ 1 \times 9 - 6 \div 6 = 8 \\ 6 - 1 + 9 - 6 = 8 \end{array}$$

$$\begin{array}{l} 1 \times 6 \times 6 \div 9 = 4 \\ 1 + 6 + 6 - 9 = 4 \end{array}$$

$$\begin{array}{l} 1 \times 6 \div 6 \times 9 = 9 \\ 1 + 6 - 6 + 9 = 10 \end{array}$$

$$1 + 6 \times 6 \div 9 = 5$$

$$\begin{array}{l} 1 \times (6 \div 6 + 9) = 10 \\ 1 + 6 \div 6 \times 9 = 10 \\ 1 + 6 \div 6 \times 9 = 10 \end{array}$$

1 6 7 9

$$\begin{array}{l} 16 \div (7 + 9) = 1 \\ (16 - 7) \div 9 = 1 \end{array}$$

$$\begin{array}{l} 19 - (6 + 7) = 6 \\ 19 - 6 - 7 = 6 \end{array}$$

$$\begin{array}{l} 17 - (6 + 9) = 2 \\ 17 - 6 - 9 = 2 \end{array}$$

$$\begin{array}{l} 6 - 1 + 9 - 7 = 7 \\ 6 + 9 - (1 + 7) = 7 \end{array}$$

$$\begin{array}{l} 1 \times 6 \div (9 - 7) = 3 \\ 1 \times 6 + 7 - 9 = 4 \end{array}$$

$$\begin{array}{l} 1 \times (6 + 9 - 7) = 8 \\ 1 + 6 - 7 + 9 = 9 \\ (1 + 6) \div 7 \times 9 = 9 \end{array}$$

$$\begin{array}{l} 1 \times (6 + 7 - 9) = 4 \\ 1 \times 6 + 7 - 9 = 4 \end{array}$$

$$\begin{array}{l} (1 + 6) \div 7 + 9 = 10 \\ (1 + 69) \div 7 = 10 \\ 1 \times (7 - 6 + 9) = 10 \end{array}$$

$$1 + 6 + 7 - 9 = 5$$

$$\begin{array}{l} (1 + 6) \div 7 + 9 = 10 \\ (1 + 69) \div 7 = 10 \\ 1 \times (7 - 6 + 9) = 10 \end{array}$$

1689

$8 + 9 - 16 = 1$	$(1 + 6 + 9) \div 8 = 2$	$18 - (6 + 9) = 3$ $18 - 6 - 9 = 3$ $(1 + 8 + 9) \div 6 = 3$	$6 - 18 \div 9 = 4$ $6 - 1 + 8 - 9 = 4$ $6 - (1 + 9 - 8) = 4$	$1 \times (6 + 8 - 9) = 5$ $1 \times 6 + 8 - 9 = 5$
$1 + 6 + 8 - 9 = 6$	$1 \times (6 + 9 - 8) = 7$ $1 + 6 \times (9 - 8) = 7$	$1 + 6 + 9 - 8 = 8$	$9 \times (8 - (1 + 6)) = 9$ $9 \times (8 - 1 - 6) = 9$	$8 - (1 + 6) + 9 = 10$ $8 - 1 - 6 + 9 = 10$

1778

$1 + 8 \times (7 - 7) = 1$	$17 - (7 + 8) = 2$ $17 - 7 - 8 = 2$	$(17 + 7) \div 8 = 3$	$18 - (7 + 7) = 4$ $18 - 7 - 7 = 4$ $8 \div (1 + 7 \div 7) = 4$	$7 - 1 + 7 - 8 = 5$ $7 - (1 + 8 - 7) = 5$
$1 \times (7 + 7 - 8) = 6$ $1 \times 7 + 7 - 8 = 6$	$1 + 7 + 7 - 8 = 7$ $(1 + 7) \times 7 \div 8 = 7$	$1 \times (7 - 7 + 8) = 8$ $1 \times 7 \div 7 \times 8 = 8$	$1 + 7 - 7 + 8 = 9$ $1 \times (7 \div 7 + 8) = 9$ $1 + 7 \div 7 \times 8 = 9$	$1 + 7 \div 7 + 8 = 10$

1788

$1 + 7 \times (8 - 8) = 1$ $8 \times (1 - 7 \div 8) = 1$ $17 - (8 + 8) = 1$	$(1 + 7 + 8) \div 8 = 2$	$18 - (7 + 8) = 3$ $18 - 7 - 8 = 3$	$8 \div (1 + 8 - 7) = 4$	$7 - (1 + 8 \div 8) = 5$ $7 - 1 - 8 \div 8 = 5$
$1 \times (7 - 8 \div 8) = 6$ $1 \times 7 - 8 \div 8 = 6$ $7 - (1 + 8 - 8) = 6$	$1 \times (7 + 8 - 8) = 7$ $1 + 7 - 8 \div 8 = 7$ $1 \times 7 \times 8 \div 8 = 7$	$1 + 7 + 8 - 8 = 8$ $1 \times (7 + 8 \div 8) = 8$ $1 + 7 \times 8 \div 8 = 8$	$1 + 7 + 8 \div 8 = 9$ $(1 + 7) \div 8 + 8 = 9$	$1 + 8 - 7 + 8 = 10$

2257

$2 - (2 + 5) \div 7 = 1$ $2 - 2 \div (7 - 5) = 1$	$2 + 2 + 5 - 7 = 2$ $2 \times (2 + 5) \div 7 = 2$	$2 + (2 + 5) \div 7 = 3$ $2 + 2 \div (7 - 5) = 3$ $2 \div 2 + 7 - 5 = 3$	$2 \times 7 - 2 \times 5 = 4$ $(5 + 7) \div 2 - 2 = 4$	$2 + 2 \times 5 - 7 = 5$ $7 \times (2 - 2) + 5 = 5$
$2 \times (2 \times 5 - 7) = 6$ $2 + 2 + 7 - 5 = 6$ $2 + 2 \times (7 - 5) = 6$	$2 \times (2 + 5) - 7 = 7$	$2 \times (2 + 7 - 5) = 8$ $2 \times 2 \times (7 - 5) = 8$	$(25 - 7) \div 2 = 9$ $2 \times (7 - 5 \div 2) = 9$	$22 - (5 + 7) = 10$ $22 - 5 - 7 = 10$

3444

$3 \div (4 - 4 \div 4) = 1$ $3 - (4 + 4) \div 4 = 1$ $(3 + 4 \div 4) \div 4 = 1$	$(3 \times 4 - 4) \div 4 = 2$ $4 \div (3 - 4 \div 4) = 2$ $4 - 3 + 4 \div 4 = 2$	$3 + 4 \times (4 - 4) = 3$	$3 \times (4 - 4) + 4 = 4$ $3 \times 4 - (4 + 4) = 4$ $(3 \times 4 + 4) \div 4 = 4$	$3 + (4 + 4) \div 4 = 5$
$3 + 4 - 4 \div 4 = 6$ $3 \times (4 + 4) \div 4 = 6$	$3 + 4 + 4 - 4 = 7$ $3 + 4 \times 4 \div 4 = 7$	$3 + 4 + 4 \div 4 = 8$	$3 \times (4 - 4 \div 4) = 9$ $4 - 3 + 4 + 4 = 9$	$44 - 34 = 10$

3457

$3 \times 4 \div (5 + 7) = 1$ $(3 \times 4 - 5) \div 7 = 1$	$(3 \times 5 - 7) \div 4 = 2$ $3 \times (7 - 5) - 4 = 2$ $4 - (3 + 7) \div 5 = 2$	$4 - 3 + 7 - 5 = 3$	$3 \times 5 - (4 + 7) = 4$ $3 \times 5 - 4 - 7 = 4$	$3 + 4 + 5 - 7 = 5$ $(3 + 4) \times 5 \div 7 = 5$
$3 \times (4 + 5 - 7) = 6$ $3 \times 4 \div (7 - 5) = 6$	$35 - 4 \times 7 = 7$ $(35 - 7) \div 4 = 7$	$(3 + 7) \times 4 \div 5 = 8$ $4 \times (3 + 7) \div 5 = 8$	$3 \div 4 \times (5 + 7) = 9$ $3 + 4 - 5 + 7 = 9$	$3 \times 4 + 5 - 7 = 10$ $(3 + 47) \div 5 = 10$

3459

$4 \times 9 - 35 = 1$ $9 - 4 \times (5 - 3) = 1$	$3 - (4 + 5) \div 9 = 2$ $3 - 4 \div (9 - 5) = 2$	$3 + 4 + 5 - 9 = 3$ $3 \times (4 + 5) \div 9 = 3$	$3 + (4 + 5) \div 9 = 4$ $3 + 4 \div (9 - 5) = 4$	$(34 - 9) \div 5 = 5$ $4 - 3 + 9 - 5 = 5$
$(3 \times 5 + 9) \div 4 = 6$ $45 - 39 = 6$ $45 \div 3 - 9 = 6$	$35 \div (9 - 4) = 7$ $3 \times 9 - 4 \times 5 = 7$	$3 + 45 \div 9 = 8$ $3 \times 4 + 5 - 9 = 8$	$3 + 54 \div 9 = 9$ $54 \div 3 - 9 = 9$ $54 \div (9 - 3) = 9$	$3 \times 5 + 4 - 9 = 10$ $3 \times (9 - 4) - 5 = 10$

3568

$3 \div (5 + 6 - 8) = 1$ $3 \times 5 - (6 + 8) = 1$ $3 \times 5 - 6 - 8 = 1$	$(3 \times 6 - 8) \div 5 = 2$ $5 \div 3 \times 6 - 8 = 2$	$(3 + 6) \div (8 - 5) = 3$ $3 \times (8 - 5) - 6 = 3$ $5 \div (3 - 8 \div 6) = 3$	$(3 + 5) \div (8 - 6) = 4$ $6 \times (5 - 3) - 8 = 4$	$3 \times 6 - (5 + 8) = 5$ $3 \times 6 - 5 - 8 = 5$ $3 + 6 \div (8 - 5) = 5$
$3 + 5 + 6 - 8 = 6$ $(3 + 5) \times 6 \div 8 = 6$	$(3 + 5) \div 8 + 6 = 7$ $3 \div (8 - 5) + 6 = 7$	$38 - 5 \times 6 = 8$	$3 \times (5 + 6 - 8) = 9$ $3 \div 6 \times 8 + 5 = 9$	$3 + 56 \div 8 = 10$ $3 + 5 - 6 + 8 = 10$

3 5 7 7

$3 \times 5 - (7 + 7) = 1$	$37 - 5 \times 7 = 2$	$3 + 5 \times (7 - 7) = 3$	$(35 - 7) \div 7 = 4$	$3 \times (7 - 7) + 5 = 5$
$3 \times 5 - 7 - 7 = 1$	$5 - (3 + 7 - 7) = 2$	$5 - 3 + 7 \div 7 = 3$	$53 - 7 \times 7 = 4$	$(3 + 7) \div (7 - 5) = 5$
$5 - (3 + 7 \div 7) = 1$				
$(35 + 7) \div 7 = 6$	$3 + 5 - 7 \div 7 = 7$	$3 + 5 + 7 - 7 = 8$	$3 + 5 + 7 \div 7 = 9$	$5 \times (3 - 7 \div 7) = 10$
	$7 \times (3 + 5 - 7) = 7$	$3 + 5 \times 7 \div 7 = 8$	$3 \times 7 - (5 + 7) = 9$	

3 5 8 8

$3 \times (8 - 5) - 8 = 1$	$(3 + 5 + 8) \div 8 = 2$	$3 + 5 \times (8 - 8) = 3$	$8 - 8 \div (5 - 3) = 4$	$3 \times (8 - 8) + 5 = 5$
$3 \div 8 + 5 \div 8 = 1$		$5 - 3 + 8 \div 8 = 3$		
$5 - (3 + 8 \div 8) = 1$				
$(38 - 8) \div 5 = 6$	$3 + 5 - 8 \div 8 = 7$	$3 + 5 + 8 - 8 = 8$	$3 + 5 + 8 \div 8 = 9$	$5 \times (3 - 8 \div 8) = 10$
		$3 + 5 \times 8 \div 8 = 8$	$(3 + 5) \div 8 + 8 = 9$	

3 6 6 6

$3 - (6 + 6) \div 6 = 1$	$(3 \times 6 - 6) \div 6 = 2$	$3 + 6 \times (6 - 6) = 3$	$(3 \times 6 + 6) \div 6 = 4$	$3 + (6 + 6) \div 6 = 5$
$36 \div (6 \times 6) = 1$	$6 \div (3 + 6 - 6) = 2$	$36 \div (6 + 6) = 3$	$6 \div (3 + 6) \times 6 = 4$	$(36 - 6) \div 6 = 5$
$36 \div 6 \div 6 = 1$	$6 - (3 + 6 \div 6) = 2$			
$3 \times (6 + 6) \div 6 = 6$	$(36 + 6) \div 6 = 7$	$3 + 6 - 6 \div 6 = 8$	$3 + 6 + 6 - 6 = 9$	$3 + 6 + 6 \div 6 = 10$
$3 \times (6 - 6) + 6 = 6$			$3 + 6 \times 6 \div 6 = 9$	

3 6 6 7

$37 - 6 \times 6 = 1$	$6 - 3 + 6 - 7 = 2$	$3 + 7 \times (6 - 6) = 3$	$6 - 3 + 7 - 6 = 4$	$3 \times 6 - (6 + 7) = 5$
$6 \div 3 + 6 - 7 = 1$	$6 - (3 + 7 - 6) = 2$	$6 \div (3 + 6 - 7) = 3$		$3 \times 6 - 6 - 7 = 5$
	$6 \div (3 \times (7 - 6)) = 2$			
$(36 + 6) \div 7 = 6$	$3 \times (6 - 6) + 7 = 7$	$3 + 6 + 6 - 7 = 8$	$3 - 6 \div 6 + 7 = 9$	$3 + 6 - 6 + 7 = 10$
$6 \times 7 - 36 = 6$			$3 + 6 \times (7 - 6) = 9$	$3 + 6 \div 6 \times 7 = 10$
			$(3 + 6) \times (7 - 6) = 9$	

3 6 6 9

$3 \div (6 + 6 - 9) = 1$	$3 \div 6 + 9 \div 6 = 2$	$3 + 9 \times (6 - 6) = 3$	$3 \times (6 + 6) \div 9 = 4$	$3 + 6 \div (9 - 6) = 5$
$3 - 6 \div (9 - 6) = 1$	$6 - 36 \div 9 = 2$	$3 \times 6 - (6 + 9) = 3$	$3 \div 9 \times (6 + 6) = 4$	$6 - (3 + 6) \div 9 = 5$
$(3 + 9 - 6) \div 6 = 1$	$(6 - 3) \times 6 \div 9 = 2$	$3 \times 6 - 6 - 9 = 3$		
$3 + 6 + 6 - 9 = 6$	$3 + 6 \times 6 \div 9 = 7$	$3 \times 6 \div 9 + 6 = 8$	$3 \times (6 + 6 - 9) = 9$	$36 \div 9 + 6 = 10$
$(3 + 6) \times 6 \div 9 = 6$		$(3 + 9) \div 6 + 6 = 8$	$6 \times (3 - 9 \div 6) = 9$	

3 6 8 8

$6 \div 3 - 8 \div 8 = 1$	$3 \times 6 - (8 + 8) = 2$	$3 + 6 \times (8 - 8) = 3$	$(38 - 6) \div 8 = 4$	$(38 - 8) \div 6 = 5$
$8 \div (8 - 6) - 3 = 1$	$3 \times 6 - 8 - 8 = 2$	$6 - (3 + 8 - 8) = 3$	$6 - 3 + 8 \div 8 = 4$	
$8 \times 8 - 63 = 1$	$6 \div (3 + 8 - 8) = 2$		$6 + 8 \div 8 - 3 = 4$	
$3 \times (8 - 8) + 6 = 6$	$3 + 8 \div (8 - 6) = 7$	$3 + 6 - 8 \div 8 = 8$	$3 + 6 + 8 - 8 = 9$	$3 + 6 + 8 \div 8 = 10$
	$8 - 3 + 8 - 6 = 7$	$3 \div 6 \times (8 + 8) = 8$	$3 + 6 \times 8 \div 8 = 9$	$3 \times 8 - (6 + 8) = 10$

3 7 7 7

$3 - (7 + 7) \div 7 = 1$	$(3 \times 7 - 7) \div 7 = 2$	$3 + 7 \times (7 - 7) = 3$	$(3 \times 7 + 7) \div 7 = 4$	$3 + (7 + 7) \div 7 = 5$
	$(7 - 7 \div 7) \div 3 = 2$	$7 - (3 + 7 \div 7) = 3$	$7 - (3 + 7 - 7) = 4$	$7 - 3 + 7 \div 7 = 5$
			$7 - 3 \times 7 \div 7 = 4$	$7 + 7 \div 7 - 3 = 5$
$3 \times (7 + 7) \div 7 = 6$	$3 \times (7 - 7) + 7 = 7$	$77 \div 7 - 3 = 8$	$3 + 7 - 7 \div 7 = 9$	$3 + 7 + 7 - 7 = 10$
$3 \div 7 \times (7 + 7) = 6$	$3 \times 7 - (7 + 7) = 7$			$3 + 7 \times 7 \div 7 = 10$
	$3 \times 7 - 7 - 7 = 7$			

3 7 7 9

$7 - 3 \times (9 - 7) = 1$	$7 - 3 + 7 - 9 = 2$	$3 + 9 \times (7 - 7) = 3$	$(37 - 9) \div 7 = 4$	$3 \times 7 - (7 + 9) = 5$
	$7 - (3 + 9 - 7) = 2$	$7 \div (3 \times 7 \div 9) = 3$	$7 \div 7 + 9 \div 3 = 4$	$3 \times 7 - 7 - 9 = 5$
	$(7 - 3) \div (9 - 7) = 2$		$(7 + 9) \div (7 - 3) = 4$	$(3 + 7) \div (9 - 7) = 5$
$7 - 3 + 9 - 7 = 6$	$7 \times (3 + 7 - 9) = 7$	$3 + 7 + 7 - 9 = 8$	$3 \times (7 - 7) + 9 = 9$	$73 - 7 \times 9 = 10$
				$7 \times 7 - 39 = 10$

4 4 4 4

$$\begin{array}{l} 4 \div (4 + 4 - 4) = 1 \\ 4 \times 4 \div (4 \times 4) = 1 \\ 4 \div (4 \times 4 \div 4) = 1 \end{array}$$

$$4 + (4 + 4) \div 4 = 6$$

$$\begin{array}{l} 4 \times 4 \div (4 + 4) = 2 \\ 4 - (4 + 4) \div 4 = 2 \end{array}$$

$$4 + 4 - 4 \div 4 = 7$$

$$\begin{array}{l} (4 + 4 + 4) \div 4 = 3 \\ (4 \times 4 - 4) \div 4 = 3 \end{array}$$

$$4 + 4 + 4 - 4 = 8$$

$$4 + 4 \times (4 - 4) = 4$$

$$4 + 4 + 4 \div 4 = 9$$

$$(4 + 4 \times 4) \div 4 = 5$$

$$(44 - 4) \div 4 = 10$$

4 4 5 9

$$\begin{array}{l} 45 \div 9 - 4 = 1 \\ 5 \times 9 - 44 = 1 \\ 9 \div 4 - 5 \div 4 = 1 \end{array}$$

$$\begin{array}{l} 5 - 4 + 9 - 4 = 6 \\ 5 + 9 - (4 + 4) = 6 \end{array}$$

$$\begin{array}{l} 4 \times 4 - (5 + 9) = 2 \\ 4 \times 4 - 5 - 9 = 2 \\ (4 + 4) \div (9 - 5) = 2 \end{array}$$

$$\begin{array}{l} (44 - 9) \div 5 = 7 \\ 4 \times 5 - (4 + 9) = 7 \\ 4 \times 5 - 4 - 9 = 7 \end{array}$$

$$\begin{array}{l} 4 - (4 + 5) \div 9 = 3 \\ 4 - 4 \div (9 - 5) = 3 \end{array}$$

$$(4 + 4 \times 9) \div 5 = 8$$

$$\begin{array}{l} 4 + 4 + 5 - 9 = 4 \\ 4 \times (4 + 5) \div 9 = 4 \end{array}$$

$$\begin{array}{l} 4 + 45 \div 9 = 9 \\ 5 \times (4 - 4) + 9 = 9 \\ 45 - 4 \times 9 = 9 \end{array}$$

$$\begin{array}{l} 4 + (4 + 5) \div 9 = 5 \\ 4 + 4 \div (9 - 5) = 5 \\ 4 \div 4 + 9 - 5 = 5 \end{array}$$

$$4 + 54 \div 9 = 10$$

4 5 5 5

$$\begin{array}{l} 4 \div (5 - 5 \div 5) = 1 \\ (4 + 5 \div 5) \div 5 = 1 \\ 5 - (4 + 5 - 5) = 1 \end{array}$$

$$4 + (5 + 5) \div 5 = 6$$

$$\begin{array}{l} 4 \times 5 \div (5 + 5) = 2 \\ 4 - (5 + 5) \div 5 = 2 \end{array}$$

$$55 \div 5 - 4 = 7$$

$$(4 \times 5 - 5) \div 5 = 3$$

$$4 + 5 - 5 \div 5 = 8$$

$$\begin{array}{l} 4 + 5 \times (5 - 5) = 4 \\ 45 \div 5 - 5 = 4 \end{array}$$

$$4 + 5 + 5 - 5 = 9$$

$$\begin{array}{l} 4 \times (5 - 5) + 5 = 5 \\ (4 \times 5 + 5) \div 5 = 5 \end{array}$$

$$4 + 5 + 5 \div 5 = 10$$

4 5 6 9

$$\begin{array}{l} 46 - 5 \times 9 = 1 \\ 4 - (6 + 9) \div 5 = 1 \end{array}$$

$$4 + 5 + 6 - 9 = 6$$

$$\begin{array}{l} 4 \div (5 + 6 - 9) = 2 \\ 4 + 9 - 5 - 6 = 2 \end{array}$$

$$\begin{array}{l} (4 + 5) \div 9 + 6 = 7 \\ 4 \div (9 - 5) + 6 = 7 \end{array}$$

$$\begin{array}{l} 45 \div (6 + 9) = 3 \\ (4 + 5 + 9) \div 6 = 3 \\ (4 + 5) \div (9 - 6) = 3 \end{array}$$

$$4 \times (5 + 6 - 9) = 8$$

$$\begin{array}{l} 5 - 4 + 9 - 6 = 4 \\ (45 + 9) \div 6 = 9 \end{array}$$

$$4 + 5 + 9 - 9 = 9$$

$$\begin{array}{l} 4 \times 5 - (6 + 9) = 5 \\ 4 \times 5 - 6 - 9 = 5 \end{array}$$

$$4 \times 6 - (5 + 9) = 10$$

$$4 \times 6 - 5 - 9 = 10$$

4 5 9 9

$$\begin{array}{l} 4 \div (5 - 9 \div 9) = 1 \\ 4 \div 9 + 5 \div 9 = 1 \\ (4 + 9 \div 9) \div 5 = 1 \end{array}$$

$$(45 + 9) \div 9 = 6$$

$$\begin{array}{l} (4 + 5 + 9) \div 9 = 2 \\ 4 \times 5 - (9 + 9) = 2 \end{array}$$

$$(4 + 59) \div 9 = 7$$

$$\begin{array}{l} 54 \div (9 + 9) = 3 \\ 9 - 54 \div 9 = 3 \end{array}$$

$$4 + 5 - 9 \div 9 = 8$$

$$\begin{array}{l} 4 + 5 \times (9 - 9) = 4 \\ (45 - 9) \div 9 = 4 \\ 49 - 5 \times 9 = 4 \end{array}$$

$$4 + 5 + 9 \div 9 = 10$$

$$\begin{array}{l} 4 \times (9 - 9) + 5 = 5 \\ (54 - 9) \div 9 = 5 \end{array}$$

$$(4 + 5) \div 9 + 9 = 10$$

4 6 6 6

$$\begin{array}{l} 6 - (4 + 6 \div 6) = 1 \\ 6 - 4 - 6 \div 6 = 1 \end{array}$$

$$\begin{array}{l} 4 + (6 + 6) \div 6 = 6 \\ 4 \times (6 - 6) + 6 = 6 \end{array}$$

$$\begin{array}{l} 4 \times 6 \div (6 + 6) = 2 \\ 4 - (6 + 6) \div 6 = 2 \end{array}$$

$$66 \div 6 - 4 = 7$$

$$\begin{array}{l} (4 \times 6 - 6) \div 6 = 3 \\ 6 - 4 + 6 \div 6 = 3 \end{array}$$

$$4 \times 6 \times (6 + 6) = 8$$

$$4 + 6 \times (6 - 6) = 4$$

$$4 + 6 - 6 \div 6 = 9$$

$$(4 \times 6 + 6) \div 6 = 5$$

$$4 + 6 + 6 - 6 = 10$$

$$4 + 6 \times 6 \div 6 = 10$$

4 6 6 7

$$\begin{array}{l} 6 - 4 + 6 - 7 = 1 \\ 6 - (4 + 7 - 6) = 1 \end{array}$$

$$66 \div (4 + 7) = 6$$

$$\begin{array}{l} 6 \div (4 + 6 - 7) = 2 \\ 6 \div 4 \times 6 - 7 = 2 \\ 6 - 4 \times (7 - 6) = 2 \end{array}$$

$$4 \times (6 - 6) + 7 = 7$$

$$\begin{array}{l} 6 - 4 + 7 - 6 = 3 \\ 7 \times (6 - 4) - 6 = 8 \\ 6 \times 6 - 4 \times 7 = 8 \\ 6 + 6 \div (7 - 4) = 8 \end{array}$$

$$4 + 6 + 6 - 7 = 9$$

$$\begin{array}{l} 4 + 7 \times (6 - 6) = 4 \\ 46 - 6 \times 7 = 4 \end{array}$$

$$4 - 6 \div 6 + 7 = 10$$

$$(4 + 66) \div 7 = 10$$

$$4 + 6 \times (7 - 6) = 10$$

4 6 7 8

$$\begin{array}{l} 4 \times (8 - 6) - 7 = 1 \\ 48 \div 6 - 7 = 1 \\ 6 - 4 + 7 - 8 = 1 \end{array}$$

$$\begin{array}{l} 4 + (6 + 8) \div 7 = 6 \\ (4 \times 7 + 8) \div 6 = 6 \end{array}$$

$$\begin{array}{l} 4 - (6 + 8) \div 7 = 2 \\ 4 \div (6 + 8) \times 7 = 2 \end{array}$$

$$84 \div 6 - 7 = 7$$

$$\begin{array}{l} 6 - 4 + 8 - 7 = 3 \\ 4 \times (6 + 8) \div 7 = 8 \end{array}$$

$$4 \div 7 \times (6 + 8) = 8$$

$$\begin{array}{l} 7 - 4 \times 6 \div 8 = 4 \\ (7 - 4) \div 6 \times 8 = 4 \end{array}$$

$$4 \times 6 - (7 + 8) = 9$$

$$\begin{array}{l} 6 \div 4 \times 8 - 7 = 5 \\ 6 \times 8 \div 4 - 7 = 5 \end{array}$$

$$\begin{array}{l} 4 \div 6 \times (7 + 8) = 10 \\ 4 + 6 \times (8 - 7) = 10 \\ 4 \times 6 \div 8 + 7 = 10 \end{array}$$

4 6 9 9

$$\begin{aligned} 4 - 9 \div (9 - 6) &= 1 \\ 4 - (9 + 9) \div 6 &= 1 \\ 6 - (4 + 9 \div 9) &= 1 \end{aligned}$$

$$\begin{aligned} 4 \times 6 - (9 + 9) &= 6 \\ 4 \times 6 - 9 - 9 &= 6 \\ 4 \times (9 - 9) + 6 &= 6 \end{aligned}$$

$$\begin{aligned} 6 - (4 + 9 - 9) &= 2 \\ 6 \div (4 - 9 \div 9) &= 2 \\ 6 - 4 \times 9 \div 9 &= 2 \end{aligned}$$

$$\begin{aligned} 4 + 9 \div (9 - 6) &= 7 \\ 4 + (9 + 9) \div 6 &= 7 \end{aligned}$$

$$\begin{aligned} 4 \times (9 - 6) - 9 &= 3 \\ 6 - 4 + 9 \div 9 &= 3 \\ 6 + 9 \div 9 - 4 &= 3 \end{aligned}$$

$$9 - 4 + 9 - 6 = 8$$

$$4 + 6 \times (9 - 9) = 4$$

$$\begin{aligned} 4 + 6 - 9 \div 9 &= 9 \\ 9 \times (4 + 6 - 9) &= 9 \end{aligned}$$

$$6 \times 9 - 49 = 5$$

$$\begin{aligned} 4 + 6 + 9 - 9 &= 10 \\ 4 + 6 \times 9 \div 9 &= 10 \end{aligned}$$

4 7 7 8

$$\begin{aligned} 7 \times 7 - 48 &= 1 \\ 8 \div 4 - 7 \div 7 &= 1 \end{aligned}$$

$$84 \div (7 + 7) = 6$$

$$\begin{aligned} 7 \div (4 \times 7 \div 8) &= 2 \\ 7 \div (4 \times 7) \times 8 &= 2 \\ 7 - 4 + 7 - 8 &= 2 \end{aligned}$$

$$\begin{aligned} 4 \times (7 + 7) \div 8 &= 7 \\ 4 \div 8 \times (7 + 7) &= 7 \end{aligned}$$

$$\begin{aligned} 7 - 4 \times (8 - 7) &= 3 \\ (7 - 4) \times (8 - 7) &= 3 \\ 7 \div 7 + 8 \div 4 &= 3 \end{aligned}$$

$$4 \times (7 - 7) + 8 = 8$$

$$\begin{aligned} 4 + 8 \times (7 - 7) &= 4 \\ 7 - 4 + 8 - 7 &= 4 \end{aligned}$$

$$7 \times 8 - 47 = 9$$

$$\begin{aligned} (47 - 7) \div 8 &= 5 \\ 7 \div 7 + 8 - 4 &= 5 \end{aligned}$$

$$4 + 7 + 7 - 8 = 10$$

4 7 8 8

$$\begin{aligned} 7 - 48 \div 8 &= 1 \\ 7 + 8 \div 4 - 8 &= 1 \end{aligned}$$

$$\begin{aligned} 7 \div 4 \times 8 - 8 &= 6 \\ 7 \times 8 \div 4 - 8 &= 6 \end{aligned}$$

$$\begin{aligned} 7 - (4 + 8 \div 8) &= 2 \\ 7 - 4 - 8 \div 8 &= 2 \end{aligned}$$

$$\begin{aligned} 4 \times (8 - 8) + 7 &= 7 \\ 4 \div 8 \times (7 + 7) &= 7 \end{aligned}$$

$$\begin{aligned} 7 - (4 + 8 - 8) &= 3 \\ 7 - 4 \times 8 \div 8 &= 3 \end{aligned}$$

$$\begin{aligned} (48 + 8) \div 7 &= 8 \\ 7 \times 8 - 48 &= 8 \end{aligned}$$

$$\begin{aligned} 4 + 7 \times (8 - 8) &= 4 \\ 7 - 4 + 8 \div 8 &= 4 \end{aligned}$$

$$\begin{aligned} 7 + 8 \div (8 - 4) &= 9 \\ 8 \div 4 \times 8 - 7 &= 9 \end{aligned}$$

$$\begin{aligned} 7 - 8 \div (8 - 4) &= 5 \\ 8 - 4 + 8 - 7 &= 5 \end{aligned}$$

$$4 + 7 - 8 \div 8 = 10$$

5 5 5 7

$$\begin{aligned} 7 - (5 + 5 \div 5) &= 1 \\ 7 - 5 \div 5 - 5 &= 1 \end{aligned}$$

$$(5 \times 7 - 5) \div 5 = 6$$

$$\begin{aligned} 5 - 5 + 7 - 5 &= 2 \\ 5 \div 5 \times (7 - 5) &= 2 \end{aligned}$$

$$5 \times (5 - 5) + 7 = 7$$

$$\begin{aligned} 5 \div 5 + 7 - 5 &= 3 \\ 7 + 5 \div 5 - 5 &= 3 \end{aligned}$$

$$5 + 5 + 5 - 7 = 8$$

$$\begin{aligned} 55 \div 5 - 7 &= 4 \\ (5 + 5) \div 5 + 7 &= 9 \end{aligned}$$

$$\begin{aligned} 7 + 8 \div (8 - 4) &= 9 \\ 8 \div 4 \times 8 - 7 &= 9 \end{aligned}$$

$$\begin{aligned} 5 + 7 \times (5 - 5) &= 5 \\ (5 + 5) \div (7 - 5) &= 5 \end{aligned}$$

$$5 \times 7 - 5 \times 5 = 10$$

$$75 \div 5 - 5 = 10$$

5 5 6 9

$$55 - 6 \times 9 = 1$$

$$\begin{aligned} 6 \times (5 + 5 - 9) &= 6 \\ 9 \times (5 - 5) + 6 &= 6 \end{aligned}$$

$$5 - (6 + 9) \div 5 = 2$$

$$\begin{aligned} 5 + 5 + 6 - 9 &= 7 \\ 5 + (6 + 9) \div 5 &= 8 \end{aligned}$$

$$5 - 5 + 9 - 6 = 3$$

$$\begin{aligned} 5 \div 5 \times (9 - 6) &= 3 \\ 56 \div (5 + 9) &= 4 \end{aligned}$$

$$5 \div 5 + 9 - 6 = 4$$

$$\begin{aligned} 6 \times (5 - 5) + 9 &= 9 \\ (59 - 5) \div 6 &= 9 \end{aligned}$$

$$6 - 5 + 9 - 5 = 5$$

$$\begin{aligned} 5 \times (5 + 6 - 9) &= 10 \\ 5 \times 5 - 6 - 9 &= 10 \end{aligned}$$

5 5 7 7

$$\begin{aligned} 5 \div (5 + 7 - 7) &= 1 \\ 5 \div (5 \times 7 \div 7) &= 1 \end{aligned}$$

$$\begin{aligned} 55 - 7 \times 7 &= 6 \\ (5 + 7) \div (7 - 5) &= 6 \end{aligned}$$

$$5 \div 5 + 7 \div 7 = 2$$

$$7 \times (5 - 5) + 7 = 7$$

$$5 \times (7 - 5) - 7 = 3$$

$$75 \div 5 - 7 = 8$$

$$\begin{aligned} 7 - 5 + 7 - 5 &= 4 \\ (7 - 5) \times (7 - 5) &= 4 \end{aligned}$$

$$5 + 5 - 7 \div 7 = 9$$

$$5 + 5 \times (7 - 7) = 5$$

$$5 + 5 \times 7 \div 7 = 10$$

5 6 7 8

$$\begin{aligned} 5 \div (6 + 7 - 8) &= 1 \\ 56 \div (7 \times 8) &= 1 \\ 56 \div 7 \div 8 &= 1 \end{aligned}$$

$$\begin{aligned} (5 + 7) \div (8 - 6) &= 6 \\ 8 - (5 + 7) \div 6 &= 6 \end{aligned}$$

$$5 \times 6 \div (7 + 8) = 2$$

$$\begin{aligned} 5 + (6 + 8) \div 7 &= 7 \\ (6 + 8) \div (7 - 5) &= 7 \end{aligned}$$

$$\begin{aligned} 5 - (6 + 8) \div 7 &= 3 \\ 5 \times (8 - 6) - 7 &= 3 \end{aligned}$$

$$\begin{aligned} 78 \div 6 - 5 &= 8 \\ (5 + 67) \div 8 &= 9 \end{aligned}$$

$$\begin{aligned} 6 \div (5 + 7) \times 8 &= 4 \\ 6 \times (7 - 5) - 8 &= 4 \end{aligned}$$

$$\begin{aligned} (5 + 7) \times 6 \div 8 &= 9 \\ 57 - 6 \times 8 &= 9 \end{aligned}$$

$$7 - 6 \div (8 - 5) = 5$$

$$5 + 6 + 7 - 8 = 10$$

5 7 7 8

$$\begin{aligned} 57 - 7 \times 8 &= 1 \\ 7 - 5 + 7 - 8 &= 1 \end{aligned}$$

$$7 \times (7 - 5) - 8 = 6$$

$$7 - 5 \times (8 - 7) = 2$$

$$(57 - 8) \div 7 = 7$$

$$7 - 5 + 8 - 7 = 3$$

$$(57 + 7) \div 8 = 8$$

$$\begin{aligned} 7 - (7 + 8) \div 5 &= 4 \\ 7 \div 7 + 8 - 5 &= 4 \end{aligned}$$

$$58 - 7 \times 7 = 9$$

$$8 \times (7 - 5) - 7 = 9$$

$$7 \times 7 - 5 \times 8 = 9$$

$$5 + 8 \times (7 - 7) = 5$$

$$75 \div (7 + 8) = 5$$

$$7 + (7 + 8) \div 5 = 10$$

5 7 8 9

$$\begin{aligned} 5 - 8 \div (9 - 7) &= 1 \\ 7 - 5 + 8 - 9 &= 1 \\ 7 - (5 + 9 - 8) &= 1 \end{aligned}$$

$$\begin{aligned} (57 - 9) \div 8 &= 6 \\ 8 \div (5 + 7) \times 9 &= 6 \\ 85 - 79 &= 6 \end{aligned}$$

$$\begin{aligned} 5 \times (9 - 7) - 8 &= 2 \\ (7 - 5) \times (9 - 8) &= 2 \end{aligned}$$

$$\begin{aligned} 5 + (7 + 9) \div 8 &= 7 \\ (5 \times 8 + 9) \div 7 &= 7 \\ (58 - 9) \div 7 &= 7 \end{aligned}$$

$$\begin{aligned} 5 \div (7 + 8) \times 9 &= 3 \\ (5 \times 7 - 8) \div 9 &= 3 \\ 5 - (7 + 9) \div 8 &= 3 \end{aligned}$$

$$95 - 87 = 8$$

$$\begin{aligned} 7 \div (5 + 9) \times 8 &= 4 \\ 7 \times 8 \div (5 + 9) &= 4 \end{aligned}$$

$$5 + 8 \div (9 - 7) = 9$$

$$\begin{aligned} 7 - 8 \div (9 - 5) &= 5 \\ 7 \times 9 - 58 &= 5 \\ 8 - 5 + 9 - 7 &= 5 \end{aligned}$$

$$\begin{aligned} 5 \times (7 + 9) \div 8 &= 10 \\ 5 \div 8 \times (7 + 9) &= 10 \end{aligned}$$

6 7 8 8

$$\begin{aligned} 6 \div (7 - 8 \div 8) &= 1 \\ (6 + 8 \div 8) \div 7 &= 1 \\ 7 - (6 + 8 - 8) &= 1 \end{aligned}$$

$$\begin{aligned} 6 + 7 \times (8 - 8) &= 6 \\ 7 \times (8 - 6) - 8 &= 6 \end{aligned}$$

$$\begin{aligned} 7 - 6 + 8 \div 8 &= 2 \\ 7 + 8 \div 8 - 6 &= 2 \\ 8 - 6 \times (8 - 7) &= 2 \end{aligned}$$

$$\begin{aligned} 6 \times (8 - 8) + 7 &= 7 \\ 7 \times 8 - 6 \times 8 &= 8 \end{aligned}$$

$$\begin{aligned} 67 - 8 \times 8 &= 3 \\ 7 - 8 \div (8 - 6) &= 3 \\ 8 - 6 + 8 - 7 &= 3 \end{aligned}$$

$$\begin{aligned} (6 \times 8 + 8) \div 7 &= 8 \\ 7 \times 8 - 6 \times 8 &= 8 \end{aligned}$$

$$7 \div (6 + 8) \times 8 = 4$$

$$\begin{aligned} (78 - 6) \div 8 &= 9 \\ 8 \times (8 - 6) - 7 &= 9 \end{aligned}$$

$$78 \div 6 - 8 = 5$$

$$\begin{aligned} (6 + 8) \div 7 + 8 &= 10 \\ (6 + 8 \times 8) \div 7 &= 10 \\ 78 - 68 &= 10 \end{aligned}$$

6 8 8 9

$$\begin{aligned} 8 - 6 + 8 - 9 &= 1 \\ 8 - (6 + 9 - 8) &= 1 \end{aligned}$$

$$6 + 9 \times (8 - 8) = 6$$

$$\begin{aligned} 8 - 6 \times (9 - 8) &= 2 \\ (8 - 6) \times (9 - 8) &= 2 \end{aligned}$$

$$\begin{aligned} 8 \times (8 - 6) - 9 &= 7 \\ 98 \div (6 + 8) &= 7 \end{aligned}$$

$$\begin{aligned} 8 - 6 + 9 - 8 &= 3 \\ 96 - 88 &= 8 \end{aligned}$$

$$\begin{aligned} 68 \div (8 + 9) &= 4 \\ 8 \div 6 \times 9 - 8 &= 4 \end{aligned}$$

$$\begin{aligned} 6 \times (8 - 8) + 9 &= 9 \\ 77 \div 7 - 7 &= 4 \end{aligned}$$

$$\begin{aligned} 69 - 8 \times 8 &= 5 \\ 9 - 8 \div (8 - 6) &= 5 \end{aligned}$$

$$\begin{aligned} 9 \times (8 - 6) - 8 &= 10 \\ 8 \times 8 - 6 \times 9 &= 10 \end{aligned}$$

$$\begin{aligned} 7 - (7 + 7) \div 7 &= 5 \\ (77 - 7) \div 7 &= 10 \end{aligned}$$

7 7 7 7

$$\begin{aligned} 7 \div (7 + 7 - 7) &= 1 \\ 7 \times 7 \div (7 \times 7) &= 1 \\ 7 \div (7 \times 7 \div 7) &= 1 \end{aligned}$$

$$(7 \times 7 - 7) \div 7 = 6$$

$$\begin{aligned} 7 \div 7 + 7 \div 7 &= 2 \\ 7 + 7 \times (7 - 7) &= 7 \end{aligned}$$

$$(7 + 7 \times 7) \div 7 = 8$$

$$\begin{aligned} (7 + 7 + 7) \div 7 &= 3 \\ (7 + 7 \times 7) \div 7 &= 8 \end{aligned}$$

$$77 \div 7 - 7 = 4$$

$$\begin{aligned} 7 + (7 + 7) \div 7 &= 9 \\ (77 - 7) \div 7 &= 10 \end{aligned}$$

$$7 - (7 + 7) \div 7 = 5$$