

```
?- solve(numbers(5,4,0,8,9),goal(0)).
Problem: numbers = {5,4,0,8,9,} and goal = 0
considering rule 1 ...
application of rule 1 produces ( 5 * ( 4 * ( 0 * ( 8 * 9 ) ) ) )
true .
```

```
?- solve(numbers(0,5,3,5,8),goal(0)).
Problem: numbers = {0,5,3,5,8,} and goal = 0
considering rule 1 ...
application of rule 1 produces ( 0 * ( 5 * ( 3 * ( 5 * 8 ) ) ) )
true .
```

```
?- solve(numbers(7,6,7,1,0),goal(0)).
Problem: numbers = {7,6,7,1,0,} and goal = 0
considering rule 1 ...
application of rule 1 produces ( 7 * ( 6 * ( 7 * ( 1 * 0 ) ) ) )
true .
```

```
?- solve(numbers(7,0,9,2,6),goal(9)).
Problem: numbers = {7,0,9,2,6,} and goal = 9
considering rule 1 ...
considering rule 2 ...
application of rule 2 produces ( 9 + ( 7 * ( 0 * ( 2 * 6 ) ) ) )
true .
```

```
?- solve(numbers(5,4,3,1,0),goal(4)).
Problem: numbers = {5,4,3,1,0,} and goal = 4
considering rule 1 ...
considering rule 2 ...
application of rule 2 produces ( 4 + ( 5 * ( 3 * ( 1 * 0 ) ) ) )
true .
```

```
?- solve(numbers(0,2,3,5,3),goal(3)).
Problem: numbers = {0,2,3,5,3,} and goal = 3
considering rule 1 ...
considering rule 2 ...
application of rule 2 produces ( 3 + ( 0 * ( 2 * ( 5 * 3 ) ) ) )
true .
```

```
?- solve(numbers(4,5,6,4,9),goal(0)).
Problem: numbers = {4,5,6,4,9,} and goal = 0
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
application of rule 3 produces ( ( 4 - 4 ) * ( 5 * ( 6 * 9 ) ) )
true .
```

```
?- solve(numbers(2,2,4,5,6),goal(0)).
Problem: numbers = {2,2,4,5,6,} and goal = 0
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
application of rule 3 produces ( ( 2 - 2 ) * ( 4 * ( 5 * 6 ) ) )
true .
```

```
?- solve(numbers(1,4,1,2,3),goal(0)).
Problem: numbers = {1,4,1,2,3,} and goal = 0
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
application of rule 3 produces ( ( 1 - 1 ) * ( 4 * ( 2 * 3 ) ) )
true .
```

```
?- solve(numbers(1,2,2,1,0),goal(3)).
Problem: numbers = {1,2,2,1,0,} and goal = 3
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
application of rule 4 produces ( ( 1 + 2 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(4,5,2,1,0),goal(9)).
Problem: numbers = {4,5,2,1,0,} and goal = 9
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
application of rule 4 produces ( ( 4 + 5 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(3,4,2,1,0),goal(7)).
Problem: numbers = {3,4,2,1,0,} and goal = 7
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
application of rule 4 produces ( ( 3 + 4 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(6,1,2,1,0),goal(5)).
Problem: numbers = {6,1,2,1,0,} and goal = 5
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
application of rule 5 produces ( ( 6 - 1 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(3,8,7,1,0),goal(5)).
Problem: numbers = {3,8,7,1,0,} and goal = 5
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
application of rule 5 produces ( ( 8 - 3 ) + ( 7 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(9,2,2,1,0),goal(7)).
Problem: numbers = {9,2,2,1,0,} and goal = 7
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
application of rule 5 produces ( ( 9 - 2 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(2,3,2,1,0),goal(6)).
Problem: numbers = {2,3,2,1,0,} and goal = 6
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
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considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
application of rule 6 produces ( ( 2 * 3 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(3,3,2,1,0),goal(9)).
Problem: numbers = {3,3,2,1,0,} and goal = 9
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
application of rule 6 produces ( ( 3 * 3 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(2,4,2,1,0),goal(8)).
Problem: numbers = {2,4,2,1,0,} and goal = 8
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
application of rule 6 produces ( ( 2 * 4 ) + ( 2 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(8,4,4,1,0),goal(2)).
Problem: numbers = {8,4,4,1,0,} and goal = 2
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
considering rule 7 ...
application of rule 7 produces ( ( 8 / 4 ) + ( 4 * ( 1 * 0 ) ) )
true .
```

```
?- solve(numbers(8,4,4,2,0),goal(1)).
Problem: numbers = {8,4,4,2,0,} and goal = 1
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
considering rule 7 ...
application of rule 7 produces ( ( 4 / 4 ) + ( 8 * ( 2 * 0 ) ) )
true .
```

```
?- solve(numbers(6,2,4,6,0),goal(3)).
Problem: numbers = {6,2,4,6,0,} and goal = 3
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
considering rule 7 ...
application of rule 7 produces ( ( 6 / 2 ) + ( 4 * ( 6 * 0 ) ) )
true .
```

```
?- solve(numbers(1,1,1,1,1),goal(1)).
Problem: numbers = {1,1,1,1,1,} and goal = 1
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
considering rule 7 ...
considering rule 8 ...
application of rule 8 produces ( 1 - ( ( 1 - 1 ) - ( 1 - 1 ) ) )
true .
```

```
?- solve(numbers(2,2,2,2,2),goal(2)).
Problem: numbers = {2,2,2,2,2,} and goal = 2
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
considering rule 7 ...
considering rule 8 ...
application of rule 8 produces ( 2 - ( ( 2 - 2 ) - ( 2 - 2 ) ) )
true .
```

```
?- solve(numbers(3,3,3,3,3),goal(3)).
Problem: numbers = {3,3,3,3,3,} and goal = 3
considering rule 1 ...
considering rule 2 ...
considering rule 3 ...
considering rule 4 ...
considering rule 5 ...
considering rule 6 ...
considering rule 7 ...
considering rule 8 ...
application of rule 8 produces ( 3 - ( ( 3 - 3 ) - ( 3 - 3 ) ) )
true .
```