; Turing Machine Implementation for Base Four Addition With Conversion To Decimal

0 \* \* r 0

0 \_ \_ l 1

1 0 3 l 1

1 1 0 l 2

1 2 1 l 2

1 3 2 l 2

1 \_ \_ r 5

2 \* \* l 2

2 \_ \_ l 3

3 9 0 l 3

3 \_ 1 r 4

3 0 1 r 4

3 1 2 r 4

3 2 3 r 4

3 3 4 r 4

3 4 5 r 4

3 5 6 r 4

3 6 7 r 4

3 7 8 r 4

3 8 9 r 4

4 \* \* r 4

4 \_ \_ r 0

5 \* \_ r 5

5 \_ \_ r 6

6 \_ \_ r 6

6 \* \* r 7

7 \* \* r 7

7 \_ \_ l 8

8 0 3 l 8

8 1 0 l 9

8 2 1 l 9

8 3 2 l 9

8 \_ \_ r 12

9 \* \* l 9

9 \_ \_ l 10

10 9 0 l 10

10 \_ 1 r 11

10 0 1 r 11

10 1 2 r 11

10 2 3 r 11

10 3 4 r 11

10 4 5 r 11

10 5 6 r 11

10 6 7 r 11

10 7 8 r 11

10 8 9 r 11

11 \* \* r 11

11 \_ \_ r 7

12 \* \_ r 12

12 \_ \_ r 13

13 \_ \_ l 13

13 \* \* \* 14

14 \* \* r 14

14 \_ \_ l 15

15 0 9 l 15

15 1 0 l 16

15 2 1 l 16

15 3 2 l 16

15 4 3 l 16

15 5 4 l 16

15 6 5 l 16

15 7 6 l 16

15 8 7 l 16

15 9 8 l 16

15 \_ \_ r 23

16 \* \* l 16

16 \_ \_ l 17

17 \_ \_ l 17

17 \* \* r 18

18 \_ \_ l 19

19 9 0 l 19

19 \_ 1 r 20

19 0 1 r 20

19 1 2 r 20

19 2 3 r 20

19 3 4 r 20

19 4 5 r 20

19 5 6 r 20

19 6 7 r 20

19 7 8 r 20

19 8 9 r 20

20 \* \* r 20

20 \_ \_ r 21

21 \* \* r 21

21 \_ \_ r 22

22 \_ \_ r 22

22 \* \* r 14

23 9 \_ r 23

23 \_ \_ r 24

24 \_ \_ l 24

24 \* \* l 25

25 \* \* l 25

25 \_ \_ r 26

26 \* \* r 26

26 \_ \_ l 27

27 0 9 l 27

27 1 0 l 28

27 2 1 l 28

27 3 2 l 28

27 4 3 l 28

27 5 4 l 28

27 6 5 l 28

27 7 6 l 28

27 8 7 l 28

27 9 8 l 28

27 \_ \_ r 31

28 \* \* l 28

28 \_ \_ l 29

29 3 0 l 29

29 \_ 1 r 30

29 0 1 r 30

29 1 2 r 30

29 2 3 r 30

30 \* \* r 30

30 \_ \_ r 26

31 \* \_ r 31

31 \_ \_ r 32

32 \_ \_ l 32

32 \* \* r halt-accept