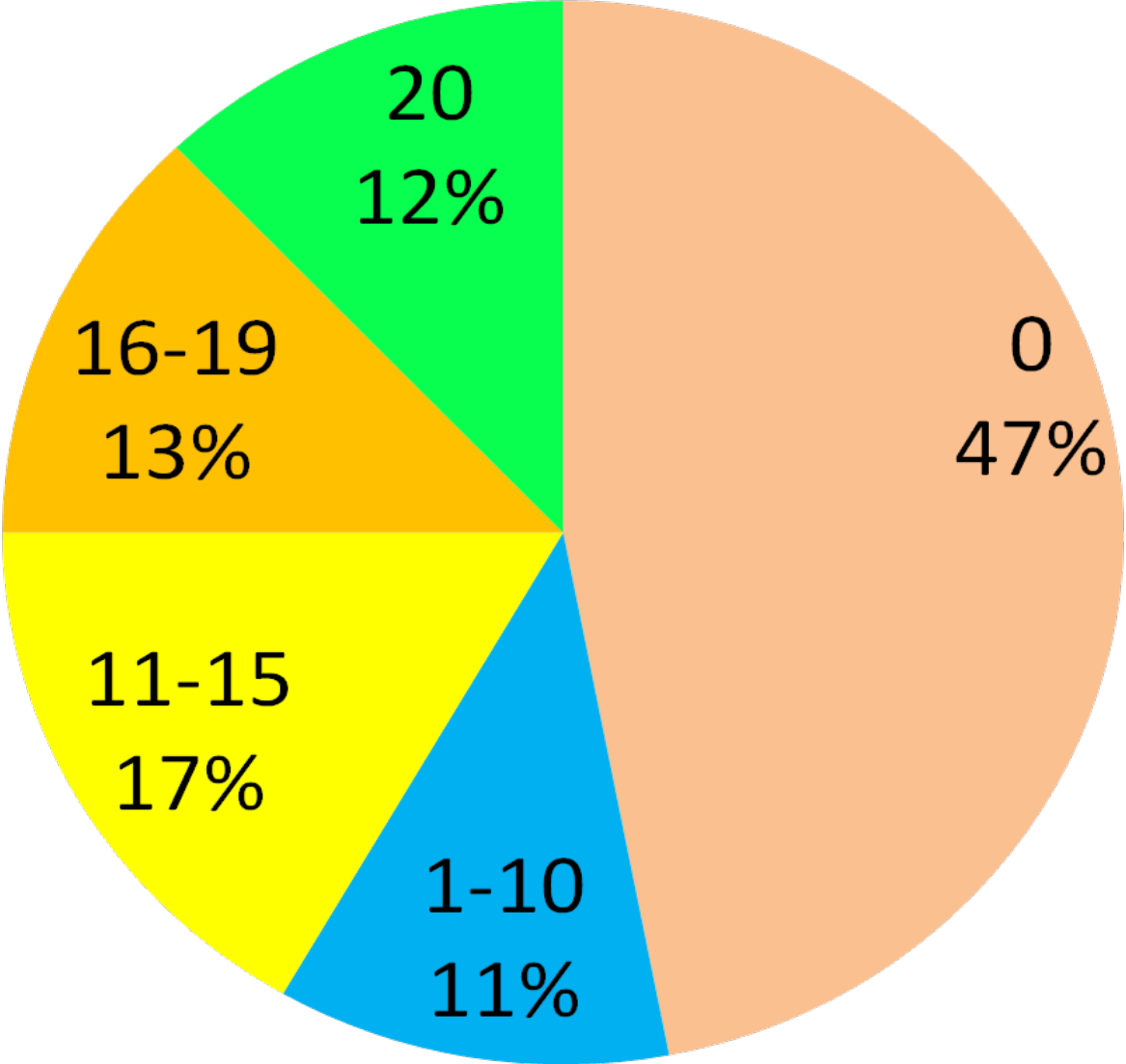
A scenic view of a sandy beach with waves crashing against the shore under a cloudy sky. The sand is light-colored and the water is a pale blue-grey. The sky is filled with soft, white clouds.

# Problem №2 Umbu-Ungu

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# Distribution of solvers by result



69 = tokapu talu tokapunga telu

48 = tokapu talu

21 = tokapunga telu

79 = tokapu talu polangipunga yepoko

48 = tokapu talu

31 = **polangipunga yepoko**

30 = polangipunga talu

15 = malapunga yepoko       $15 \equiv 3 \pmod{4}$

27 = alapunga yepoko       $27 \equiv 3 \pmod{4}$

35 = tokapu rureponga yepoko  
 $35 \equiv 3 \pmod{4}$

79 = tokapu talu polangipunga yepoko  
 $79 \equiv 3 \pmod{4}$

**yepoko = 3**

**talus = yepoko - 1 = 2**

**telu = 1**

48 = tokapu talu → **tokapu = 24**

40 = tokapu malapu

16 = malapu

24 = tokapu

15 = malapunga yepoko

21 = tokapunga telu

→  $\alpha$ -nga  $\beta = (\alpha - 4) + \beta$

48 = tokapu talu

50 = tokapu alapunga talu

69 = tokapu talu tokapunga telu

79 = tokapu talu polangipunga yepoko

$\rightarrow \gamma + \delta$

$\gamma = 24k; k \in \{1; 2; 3\},$

$9 \leq \delta \leq 32; \delta \neq 24$

base-4 system

12 rurepo

16 malapu

20 supu

24 tokapu

28 alapu

32 polangipu

1 telu

2 talu

3 yepoko

base-24 system

tokapu = 24

tokapu talu =  $24 \times 2 = 48$

tokapu yepoko =  $24 \times 3 = 72$

$\alpha$ -nga  $\beta = (\alpha - 4) + \beta$ ,

$\alpha \in \{12; 16; 20; 24; 28; 32\}$

$\beta \in \{1; 2; 3\}$

$\gamma + \delta$

$\gamma = 24k; k \in \{1; 2; 3\}$ ,

$9 \leq \delta \leq 32; \delta \neq 24$

(a)

*tokapu polangipu = 24 + 32 = 56,*

*tokapu talu rureponga telu =*

$$24 \times 2 + 12\text{nga } 3 = \mathbf{57},$$

*tokapu yepoko malapunga talu =*

$$24 \times 3 + 16\text{nga } 2 = \mathbf{86},$$

*tokapu yepoko polangipunga telu =*

$$24 \times 3 + 32\text{nga } 1 = \mathbf{101}.$$

(b)

$13 = 16$ nga 1 = **malapunga talu,**

$66 = 24 \times 2 + 20$ nga 2 =

**tokapu talu supunga talu,**

$72 = 24 \times 3 =$  tokapu yepoko,

$76 = 24 \times 2 + 28 =$  **tokapu talu alapu,**

$95 = 24 \times 3 + 24$ nga 3 =

**tokapu yepoko tokapunga yepoko.**

A landscape photograph showing a vast expanse of sand dunes on the left, leading to a beach and the ocean on the right. In the background, a large, dark, billowing plume of ash or smoke rises into a sky filled with white clouds. The text "Thank you!" is overlaid in the center of the image.

**Thank you!**