Ca	n	yo	u
so	lv	e	th
is	pu	zz	le
..	.?	??	

---

so	le	??	n
.?	th	zz	..
Ca	lv	e	pu
is	u	yo	

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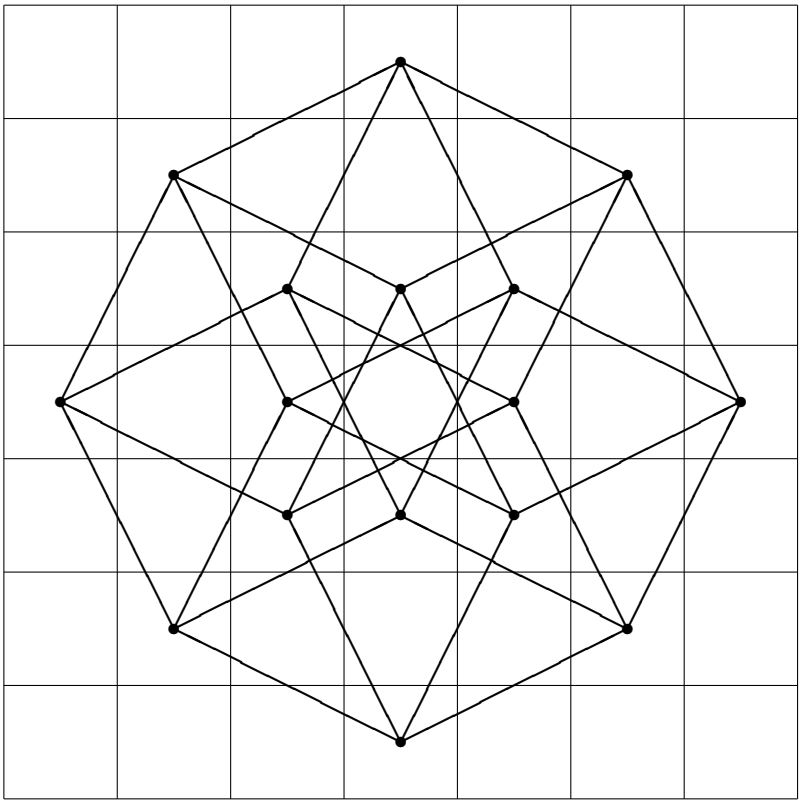
A 7 by 7 chess board.
Look at all the knight tours in 4 steps
from middle bottom square
to middle top square.



What do you see?

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Why is there

$$\frac{8! \cdot 3^8 \cdot 12! \cdot 2^{12}}{3 \cdot 2 \cdot 2}$$

$$=$$

$$43252003274489856000$$

combinations of

Rubik's cube?

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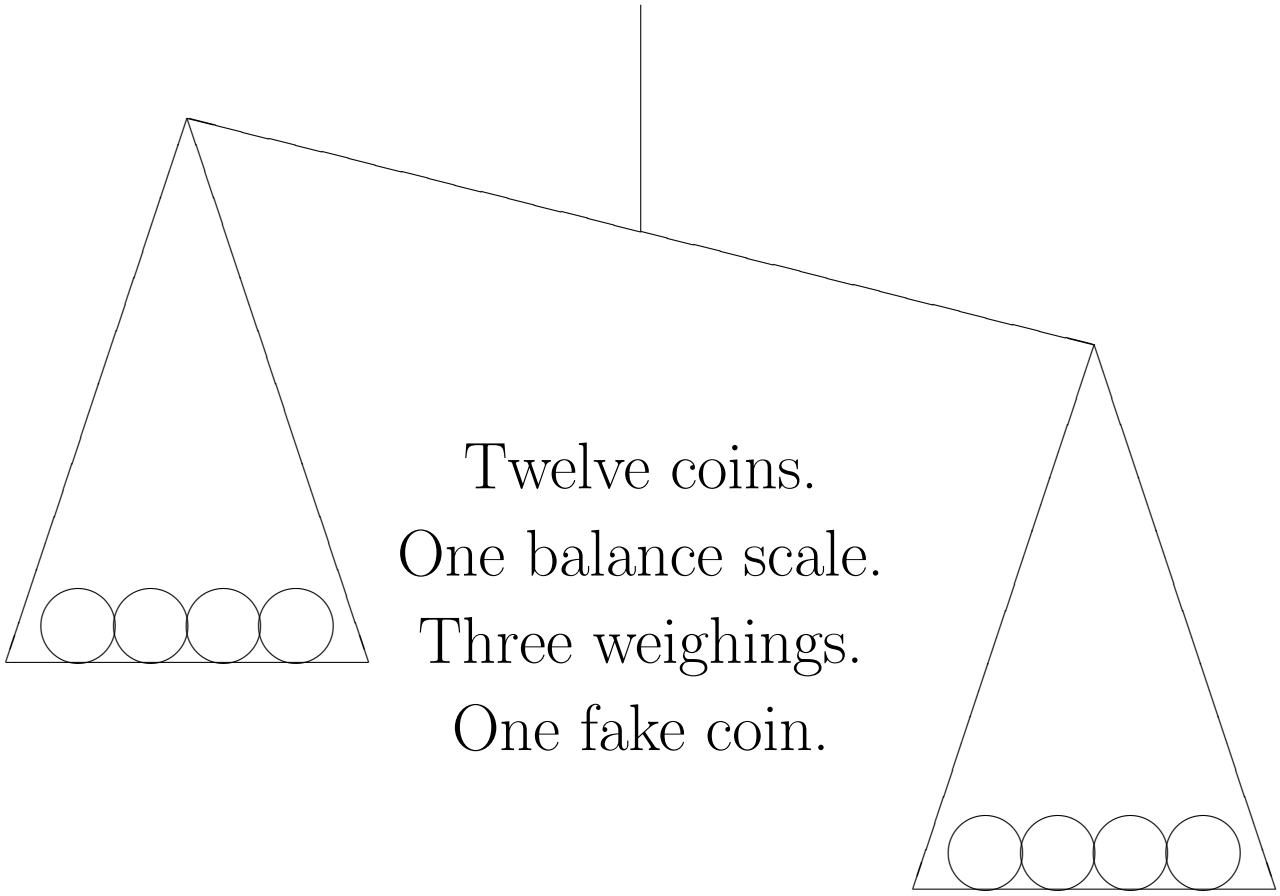

Twelve coins.
One balance scale.
Three weighings.
One fake coin.

Can you find it?

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What does the

transcendental number

$e = 2.71828182845904523536028747135266 2\ldots$

have to do with

100 randomly

stuffed holiday greeting cards?

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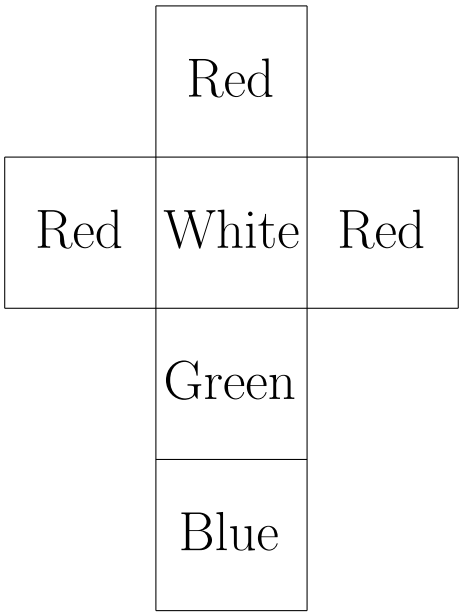
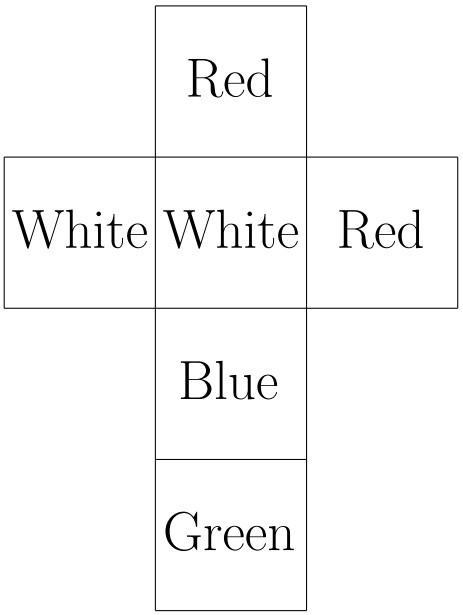
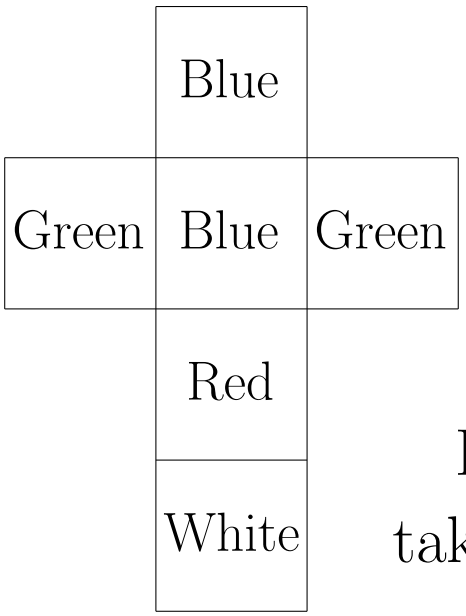
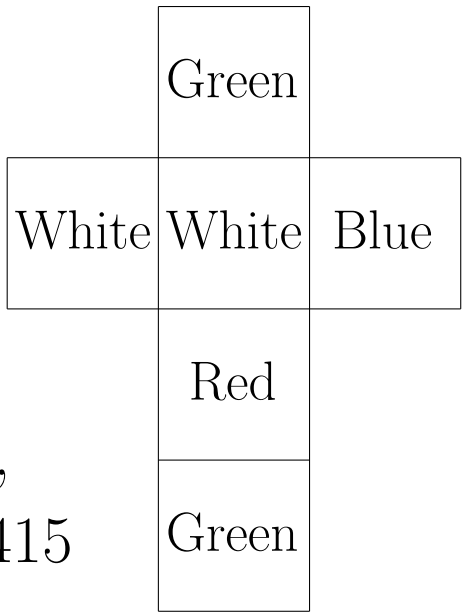




Can you stack
these four cubes
such that
all four colors
appear on each side
of your tower?





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Can you place

the following ten words

in a circle

such that

adjacent words

share a letter?

CAR	CUB	DIM	HEN	HUT
MOB	RED	SAW	SON	WIT

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Six people in a room.

Show that there are

3 people

that either

know each other

or

do not know each other.

(Can you find a second such a triple?)

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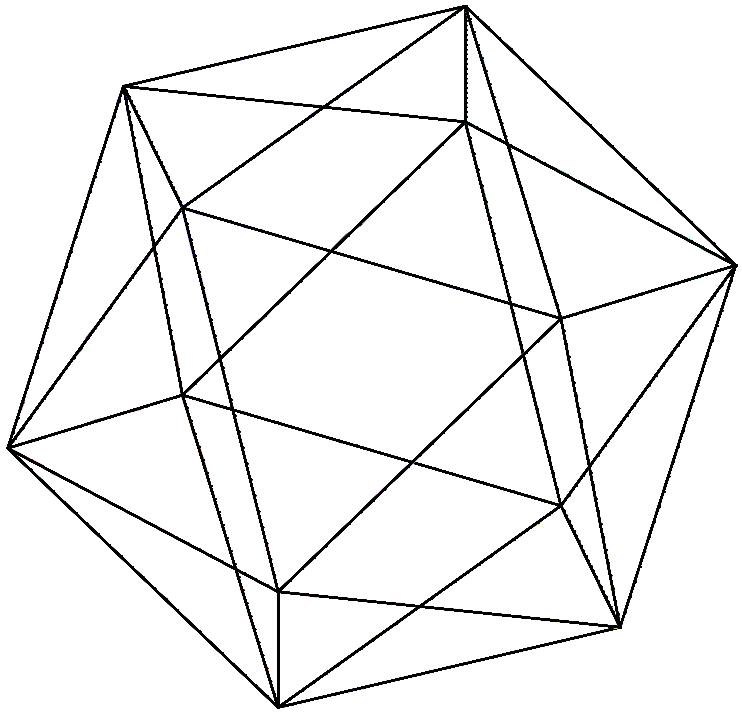
Thirty identical resistors

arranged in the following network:



What is the resistance between

two adjacent nodes?

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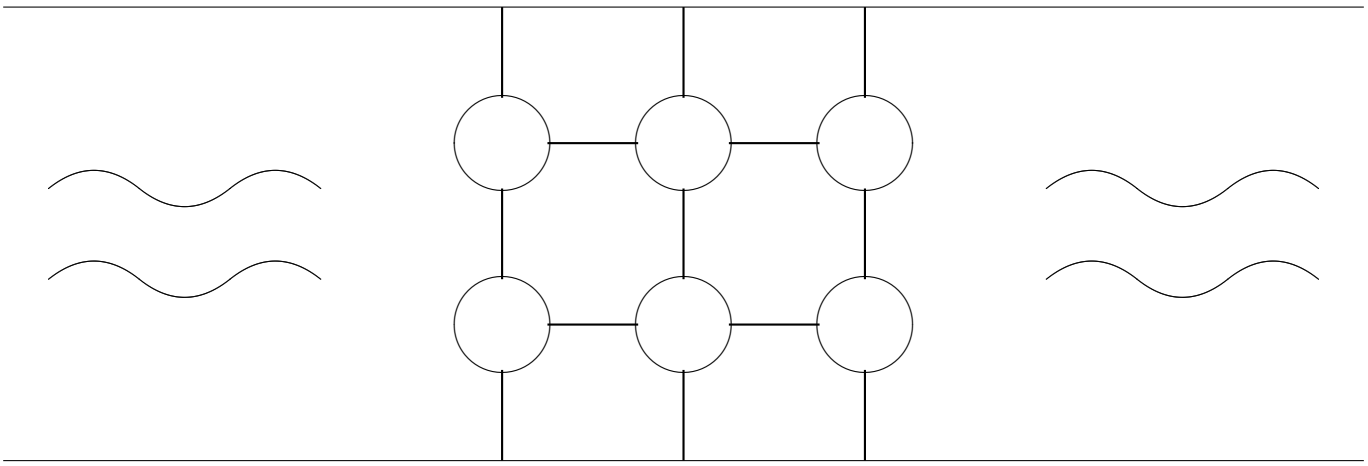

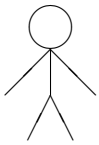

A terrible storm has struck.

Each bridge has gone down with

probability 1/2.

What are your chances that you can get

across

the river?

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Mary likes John better than
Adam and even better than George.

However, John loves Jessica more than
Elizabeth and more than Mary.

But Jessica loves Adam more than George than John.

Alas, George likes Elizabeth more than Mary more than Jessica.

Elizabeth likes Adam more than George and she cannot stand John.

And yet, Adam adores Mary more than Jessica and more than Elizabeth.

Can you match them up,
so no two people
will break up with their spouses
and elope together?

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Remove
one white square and one black square
from a chess board.

W	B	W	B	W	B	W	B
B	W	B	W	B	W	B	W
W	B	W	B	W	B	W	B
B	W	B	W		W	B	W
W	B	W	B	W	B	W	B
B		B	W	B	W	B	W
W	B	W	B	W	B	W	B
B	W	B	W	B	W	B	W

Can you tile
the remaining 62 squares
with 31 dominoes?

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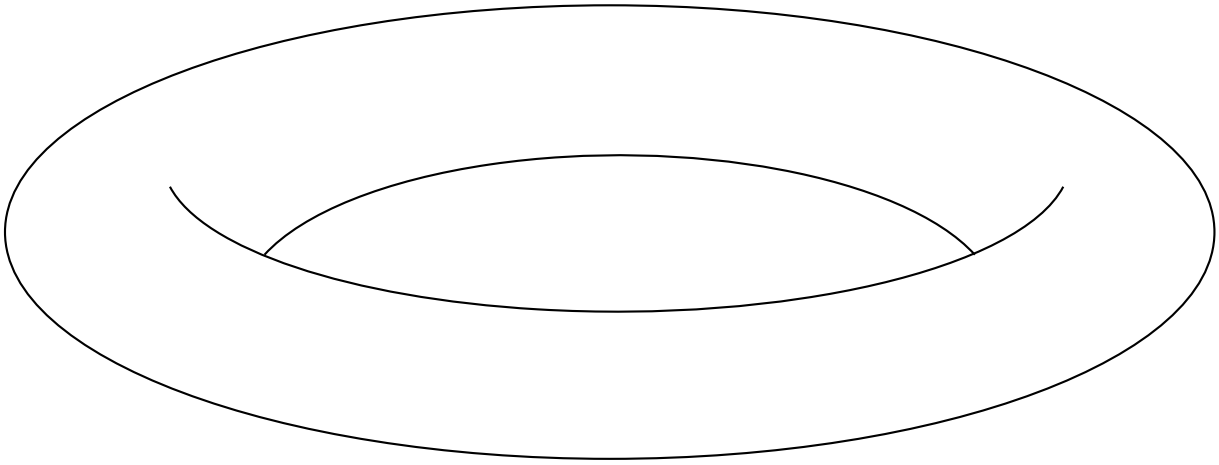
Planet Surot has the shape



How many colors

do you need

to able to color

any map of Surot?

Adjacent countries need different colors

in order not to confuse the poor surotonians.

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