



XVI. DÜRER COMPETITION

Final round
10-12 February, 2023



MATHEMATICS
RELAY ROUND
SOLUTIONS

#	ANS	Problem statement	P
E ⁺ -1	3	Nüx has three moira daughters,	3p
E ⁺ -2	36	The area of a rectangle is 64 cm^2 ,	3p
E ⁺ -3	40	Hapi, the god of the annual flooding of the Nile	3p
E ⁺ -4	13	In Eldorado a year has 20 months, and each month has 20 days.	3p
E ⁺ -5	50	King Minos divided his rectangular island of Crete	4p
E ⁺ -6	1296	Archimedes drew a square with side length 36 cm	4p
E ⁺ -7	1000	One day Mnemosyne decided to colour all natural numbers	4p
E ⁺ -8	17	Zoli wants to fill the given 4×4 table	4p
E ⁺ -9	5	The <i>binary sudoku</i> is a puzzle	5p
E ⁺ -10	12	Marvin really likes pancakes, so he asked his grandma	5p
E ⁺ -11	1349	A country has 2023 cities and there are flights between these cities.	5p
E ⁺ -12	900	Zeus's lightning is made of a copper rod of length 60	5p
E ⁺ -13	6732	Csongi bought a 12-sided convex polygon-shaped pizza.	6p
E ⁺ -14	4	For the Dürer final results announcement,	6p
E ⁺ -15	240	What is the biggest positive integer which divides $p^4 - q^4$	6p
E ⁺ -16	1514	What is the remainder of	6p