

Problems of April 9, 2007

Survo puzzle 51/2007 (35)

	A	B	C	D	E	
1	5	2			8	35
2				11		40
3			10			45
	28	23	24	21	24	

Survo puzzle 52/2007 (530)

	A	B	C	D	E	
1			17	3		49
2					11	60
3	5	18				46
4		7	12			55
	42	41	41	42	44	

Survo puzzle 53/2007 (1100 without the hint)

	A	B	C	D	
1					27
2					13
3					53
4					43
	47	39	29	21	

Hint: Let X be the positive root of the quadratic equation $456X^2 + 1416X - 131 = 0$.

Then X can be represented as a continued fraction

$$X = \cfrac{1}{A1 + \cfrac{1}{B1 + \cfrac{1}{C1 + \cfrac{1}{D1 + X}}}}$$

and this gives the the first row of the table.

In Survo these numbers can be evaluated, for example, by the following recursive formulas of editorial computing:

```
Y(N,X):=if(N=0)then(X)else(1/(Y(N-1,X)-A(N-1,X)))
A(N,X):=if(N=0)then(int(X))else(int(Y(N,X)))
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