

## A FIBONACCI CROSTIC

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Use the definitions below to write the words to which they refer; then enter the appropriate letters in the diagram to complete a quotation from a mathematical work. The first letters of the defined words give the author and title from which the quotation is taken. The end of each word is indicated by a black square following it.

A. The first, fourth, and fifth clue numbers for word A; also, the sum of its five clue numbers.

$\overline{76}$   $\overline{40}$   $\overline{36}$   $\overline{29}$   $\overline{18}$

B. A Fibonacci count-down.

$\overline{23}$   $\overline{17}$   $\overline{65}$   $\overline{88}$   $\overline{66}$  ,  $\overline{43}$   $\overline{156}$   $\overline{124}$   $\overline{42}$  ,

C. An undiscovered number.

$\overline{66}$   $\overline{88}$   $\overline{115}$   $\overline{32}$   $\overline{32}$  ,  $\overline{175}$   $\overline{52}$   $\overline{38}$   
 $\overline{169}$   $\overline{24}$   $\overline{46}$   $\overline{138}$   $\overline{105}$   $\overline{10}$   $\overline{184}$   $\overline{105}$   $\overline{90}$   $\overline{161}$

D. Compass point.

$\overline{174}$   $\overline{96}$   $\overline{7}$   $\overline{130}$   $\overline{150}$   $\overline{185}$   $\overline{134}$   $\overline{39}$   $\overline{130}$   
 $\overline{12}$   $\overline{99}$   $\overline{174}$   $\overline{47}$   $\overline{7}$   $\overline{130}$   $\overline{67}$

E. Rank given by subscript of first positive Fibonacci number divisible by a number.

$\overline{5}$   $\overline{19}$   $\overline{61}$   $\overline{11}$   $\overline{93}$   $\overline{119}$   $\overline{149}$   $\overline{25}$   $\overline{51}$   $\overline{170}$

F. See G.

$\overline{129}$   $\overline{27}$   $\overline{163}$   $\overline{183}$   $\overline{91}$

G. Platonic solid in which the (word F) of a diagonal of a face to an edge is the Golden Section.

$\overline{81}$   $\overline{113}$   $\overline{81}$   $\overline{125}$   $\overline{107}$   $\overline{110}$   $\overline{131}$   $\overline{125}$   $\overline{171}$   $\overline{141}$   $\overline{177}$   $\overline{157}$

H. Phyllotaxis finds the numbers of A and J here and in V.

$\overline{57}$   $\overline{26}$   $\overline{9}$   $\overline{20}$   $\overline{57}$   $\overline{28}$   $\overline{84}$   $\overline{104}$   $\overline{16}$

I.  $E = IR$ .

$\overline{147}$   $\overline{164}$   $\overline{53}$   $\overline{181}$   $\overline{182}$   $\overline{3}$   $\overline{74}$

J. See H and first eight clue numbers of J.

$\overline{2}$   $\overline{1}$   $\overline{13}$   $\overline{8}$   $\overline{55}$   $\overline{21}$   $\overline{144}$   $\overline{6}$

- K. Secret emblem  
of the Pythagoreans.  $\overline{109}$   $\overline{100}$   $\overline{35}$   $\overline{120}$   $\overline{71}$   $\overline{122}$   $\overline{62}$   $\overline{71}$   $\overline{146}$   $\overline{146}$   $\overline{153}$   
 $\overline{146}$   $\overline{56}$   $\overline{94}$   $\overline{49}$   $\overline{44}$   $\overline{22}$   $\overline{82}$   $\overline{146}$
- L. Boundless.  $\overline{128}$   $\overline{86}$   $\overline{59}$   $\overline{123}$   $\overline{86}$   $\overline{140}$   $\overline{155}$   $\overline{167}$
- M. Music of the ?.  $\overline{69}$   $\overline{78}$   $\overline{145}$   $\overline{136}$   $\overline{112}$   $\overline{136}$   $\overline{121}$
- N. Type of number  
in which the sum of  
the aliquot divisors  
exceeds the number  
itself.  $\overline{54}$   $\overline{118}$   $\overline{48}$   $\overline{135}$   $\overline{33}$   $\overline{143}$   $\overline{135}$   $\overline{152}$
- O. Exponents used  
in hand computations.  $\overline{37}$   $\overline{133}$   $\overline{158}$   $\overline{116}$   $\overline{79}$   $\overline{85}$   $\overline{87}$   $\overline{108}$   $\overline{172}$   $\overline{60}$
- P. Necessary  
and sufficient.  $\overline{14}$   $\overline{58}$   $\overline{104}$
- Q. Form  
 $F_n = \frac{\alpha^n - \beta^n}{\alpha - \beta}$ .  $\overline{117}$   $\overline{179}$   $\overline{64}$   $\overline{142}$   $\overline{15}$
- R. He proved  
 $e^{i\pi} = -1$   $\overline{165}$   $\overline{92}$   $\overline{30}$   $\overline{165}$   $\overline{41}$
- S. Horizontal  
arrays.  $\overline{154}$   $\overline{173}$   $\overline{159}$   $\overline{166}$
- T. The Golden  
Section.  $\overline{139}$   $\overline{31}$   $\overline{70}$   $\overline{176}$   $\overline{101}$  or  $\overline{70}$   $\overline{50}$   $\overline{63}$
- U. Asked secretly  
by the mathema-  
tically uninitiated  
about phyllotaxis,  
the Golden Section,  
and the ubiquity of  
Fibonacci numbers.  $\overline{127}$   $\overline{89}$   $\overline{132}$   $\overline{162}$   $\overline{75}$   $\overline{151}$   
 $\overline{137}$   $\overline{103}$   $\overline{132}$   $\overline{83}$   $\overline{162}$   $\overline{83}$   $\overline{73}$   $\overline{106}$   $\overline{114}$   $\overline{132}$
- V. See H.  $\overline{98}$   $\overline{4}$   $\overline{160}$   $\overline{45}$   $\overline{34}$   $\overline{98}$   $\overline{4}$   $\overline{4}$   $\overline{77}$   $\overline{34}$
- W. What  $5x^2$ ,  
Pascal's triangle,  
and friction have  
in common.  $\overline{168}$   $\overline{80}$   $\overline{95}$   $\overline{178}$   $\overline{178}$   $\overline{111}$   $\overline{168}$   $\overline{68}$   $\overline{95}$   $\overline{148}$   $\overline{180}$   $\overline{126}$
- X. Hypothesis  $\overline{72}$   $\overline{97}$

C 10	E 11	D 12	J 13	P 14	Q 15	H 16	V 4	E 5	J 6	D 7	J 8	H 9								
	E 25	H 26				F 27		B 17	A 18											
V 34	K 35	A 36	O 37	B 38	D 39	A 40	R 41	B 42		B 43	K 44	V 45	C 46							
T 50	E 51	B 52			I 53	N 54	J 55	K 56		H 57	P 58	L 59	O 60	E 61	K 62	T 63	Q 64	B 65		
B 66	D 67	W 68	M 69		T 70	K 71	X 72	U 73		I 74	U 75	A 76	V 77		M 78	O 79	W 80	O 81	K 82	U 83
H 84		O 85	L 86		O 87	B 88	U 89		C 90	F 91	R 92	F 93	K 94	W 95		D 96	X 97		V 98	
D 99	K 100	T 101	H 102		U 103	P 104			C 105	U 106	G 107	O 108		K 109	G 110	W 111	M 112		G 113	U 114
	B 115	O 116	Q 117	N 118	E 119	K 120	M 121		K 122	L 123	B 124	G 125	W 126		U 127	L 128	F 129	D 130	G 131	
	U 132	O 133		D 134		N 135	M 136	U 137	C 138	T 139	L 140	G 141		Q 142	N 143	J 144	M 145			
	K 146	I 147	W 148	E 149	D 150		U 151	N 152	K 153	S 154	B 155	B 156	G 157	O 158		S 159	V 160	C 161	U 162	
	F 163	I 164	R 165		S 166	L 167	W 168	C 169	E 170	G 171					O 172	S 173	D 174	B 175	T 176	
				G 177	W 178	Q 179	W 180	I 181							I 182	F 183	C 184	D 185		